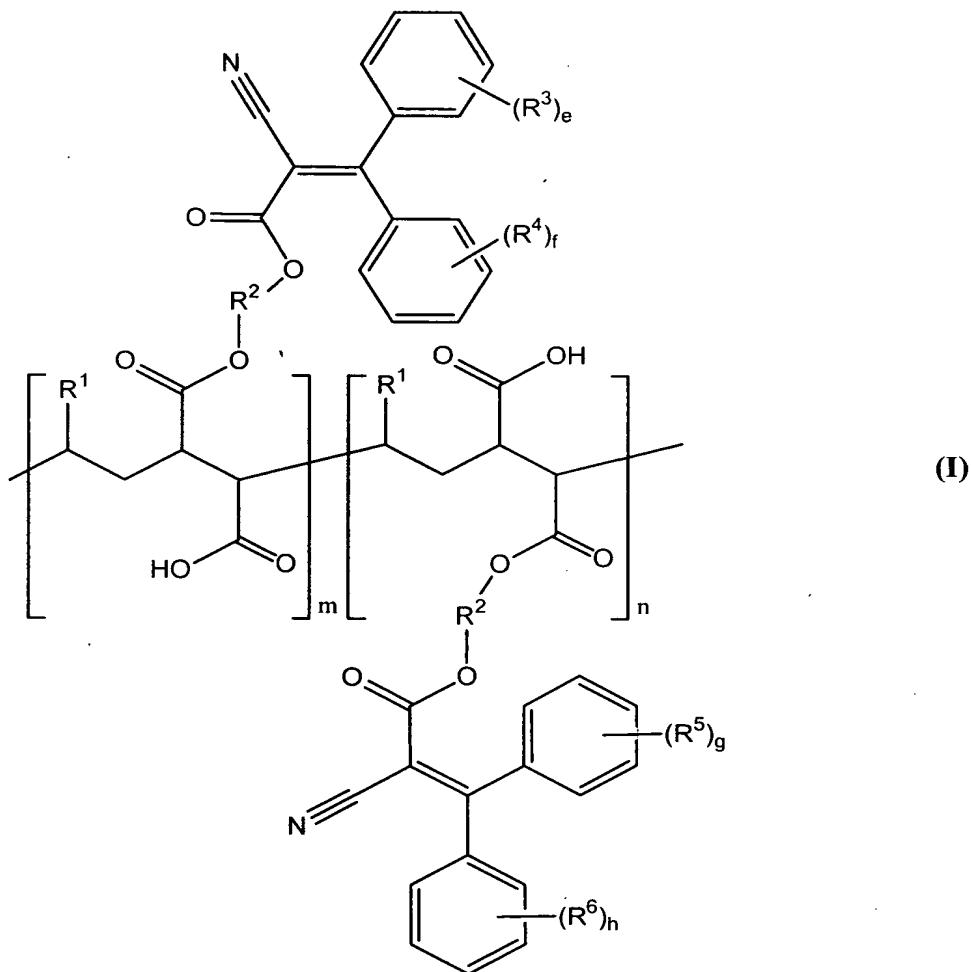


**WHAT IS CLAIMED IS:**

1. A compound of formula (I):



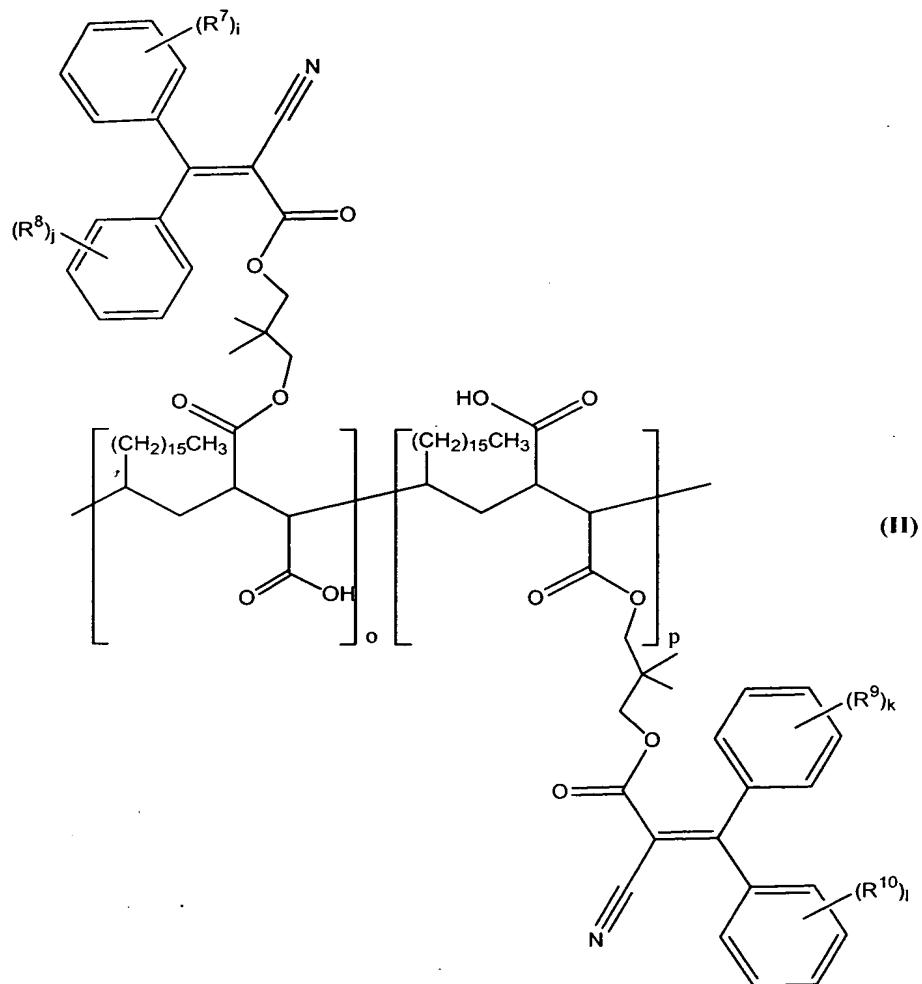
wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, and R<sup>6</sup> are the same or different and selected from the  
5 group consisting of C<sub>1</sub>-C<sub>30</sub> alkyl, C<sub>1</sub>-C<sub>30</sub> substituted alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl,  
substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino, e, g, f, and h  
are each in the range of 0 to 4, m and n are each in the range of 0 to 5000, and the sum  
of m plus n is at least 1.

2. The compound of claim 1, wherein R<sup>1</sup> and R<sup>2</sup> are selected from the group consisting of C<sub>1</sub>-C<sub>30</sub> alkyl groups.

3. The compound of claim 2, wherein R<sup>1</sup> is a C<sub>16</sub> straight chain alkyl group, and R<sup>2</sup> is a 2,2-dimethylpropyl group.

5 4. The compound of claim 1, wherein the Weight-Average Molecular Weight of said compound is in the range of about 30,000 to about 110,000.

5. A compound of formula (II):

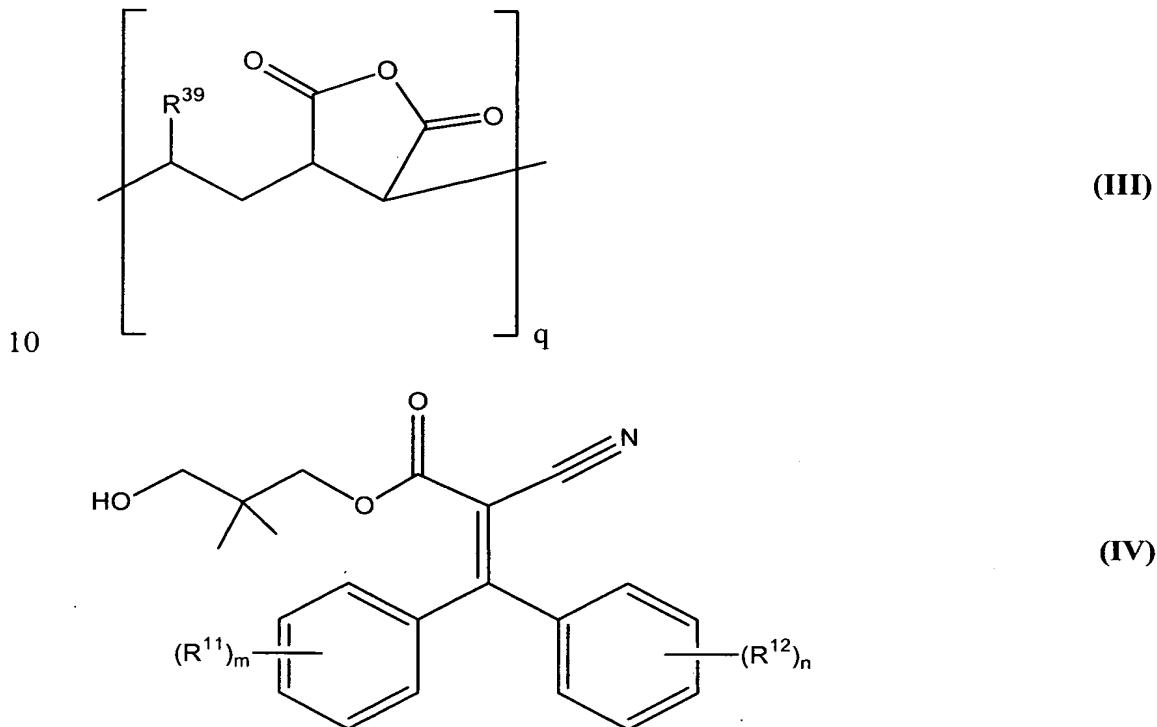


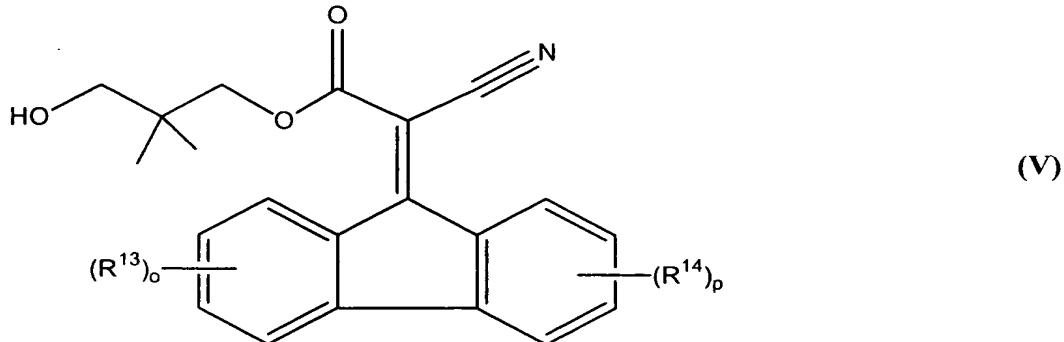
wherein R<sup>7</sup>, R<sup>8</sup>, R<sup>9</sup>, and R<sup>10</sup> are the same or different and selected from the group 10 consisting of C<sub>1</sub>-C<sub>30</sub> alkyl, C<sub>1</sub>-C<sub>30</sub> substituted alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub>

substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl, substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino, i, j, k, and l are each in the range of 0 to 4, o and p are each in the range of 0 to 5000, and the sum of o plus p is at least 1.

5        6.        The compound of claim 5, wherein the Weight-Average Molecular Weight of said compound is in the range of about 30,000 to about 110,000.

7.        The product of the reaction between the polymer of formula (III) and a compound selected from the group consisting of compounds of formulae (IV), (V), and combinations thereof:





wherein  $R^{11}$ ,  $R^{12}$ ,  $R^{13}$ ,  $R^{14}$ , and  $R^{39}$  are the same or different and selected from the group consisting of  $C_1$ - $C_{30}$  alkyl,  $C_1$ - $C_{30}$  substituted alkyl,  $C_3$ - $C_8$  cycloalkyl,  $C_3$ - $C_8$  substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl,

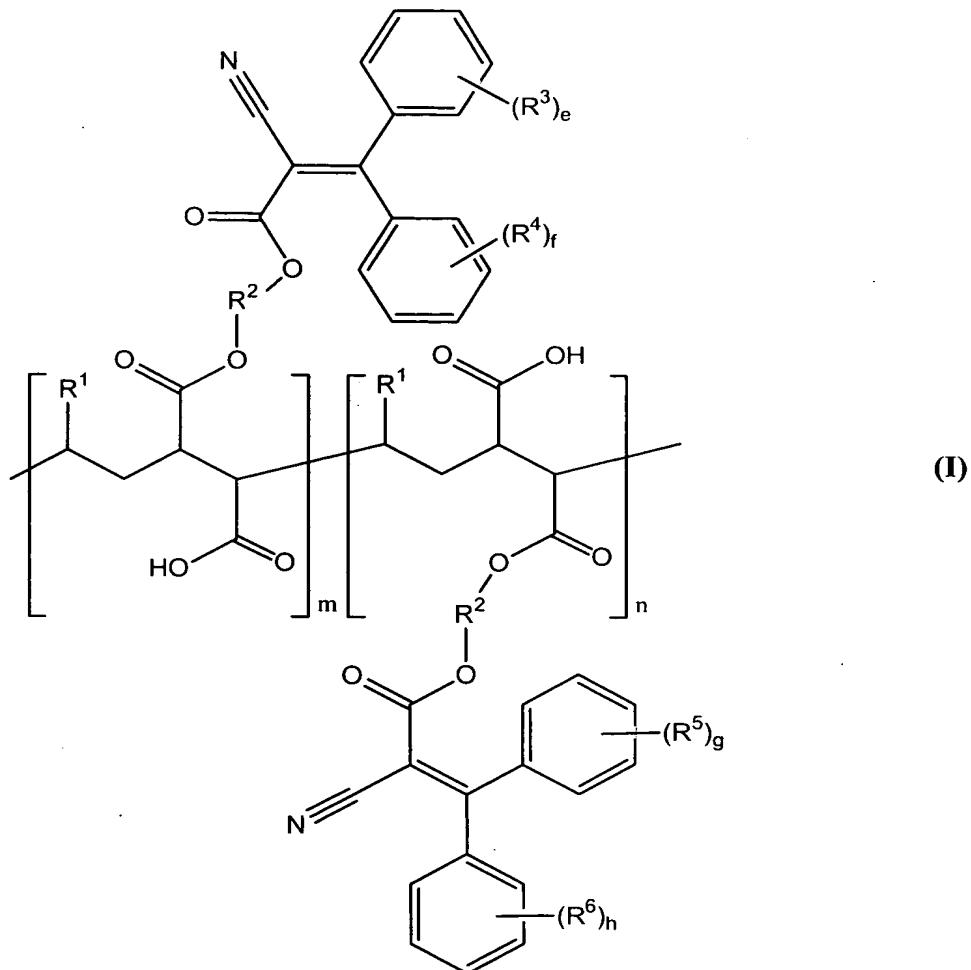
5 substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino,  $m$ ,  $n$ ,  $o$ , and  $p$  are each in the range of 0 to 4, and  $q$  is in the range of 2 to 5000.

8. The product of claim 7, wherein, wherein  $R^{39}$  is selected from group consisting of  $C_1$ - $C_{30}$  alkyl groups.

9. The product of claim 8, wherein, wherein  $R^{39}$  is a  $C_{16}$  straight chain 10 alkyl group.

10. The product of claim 7, wherein the Weight-Average Molecular Weight of said product is in the range of about 30,000 to about 110,000.

11. A sunscreen composition, comprising a mixture of a photoactive compound, and a compound of formula (I):



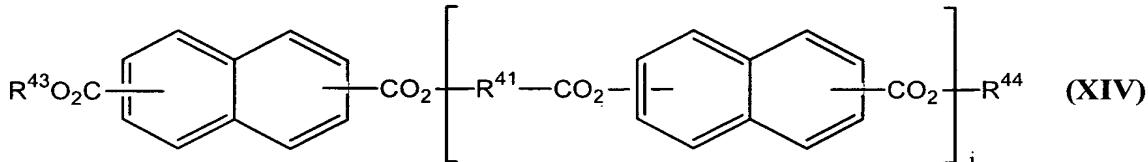
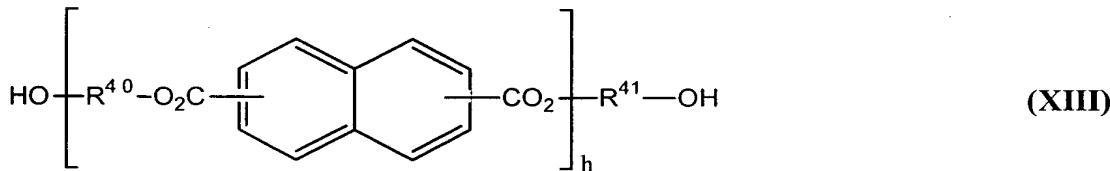
wherein  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$ , and  $R^6$  are the same or different and selected from the group consisting of  $C_1$ - $C_{30}$  alkyl,  $C_1$ - $C_{30}$  substituted alkyl,  $C_3$ - $C_8$  cycloalkyl,  $C_3$ - $C_8$  substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl, 5 substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino,  $e$ ,  $g$ ,  $f$ , and  $h$  are each in the range of 0 to 4,  $m$  and  $n$  are each in the range of 0 to 5000, and the sum of  $m$  plus  $n$  is at least 1.

12. The composition of claim 11, wherein  $R^1$  and  $R^2$  are selected from the group consisting of  $C_1$ - $C_{30}$  alkyl groups.

13. The composition of claim 12, wherein R<sup>1</sup> is a C<sub>16</sub> straight chain alkyl group, and R<sup>2</sup> is a 2,2-dimethylpropyl group.

14. The composition of claim 11, wherein said compound of formula (I) is present said composition in an amount in the range of about 0.01% to about 30% by 5 weight of the total weight of the composition.

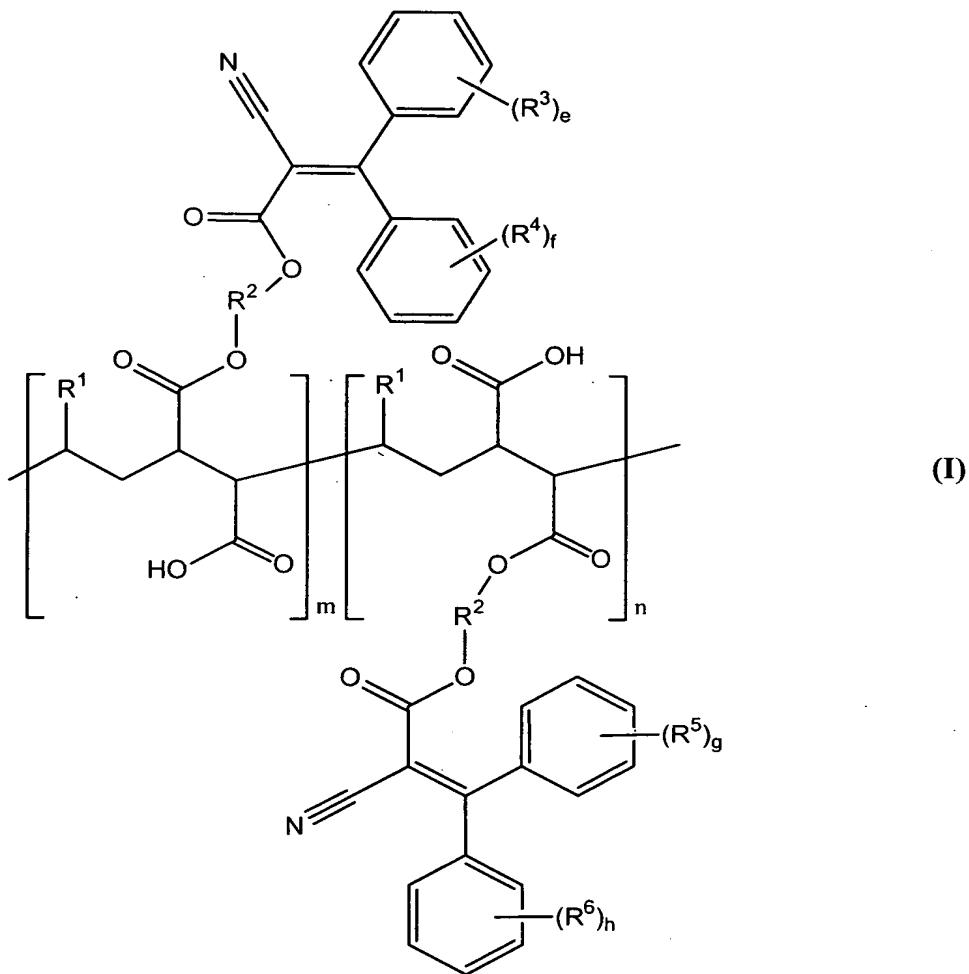
15. The composition of claim 11, further comprising a diester or polyester of naphthalene dicarboxylic acid selected from the group consisting of compounds of formulae (XIII) and (XIV), and combinations thereof:



10 wherein R<sup>43</sup> and R<sup>44</sup> are the same or different and selected from the group consisting of C<sub>1</sub>-C<sub>22</sub> alkyl groups, diols having the structure HO—R<sup>41</sup>—OH, and polyglycols having the structure HO—R<sup>40</sup>—(—O—R<sup>41</sup>—)<sub>j</sub>—OH; wherein each R<sup>40</sup> and R<sup>41</sup> is the same or different and selected from the group consisting of C<sub>1</sub>-C<sub>6</sub> straight or branched 15 chain alkyl groups; and wherein h and j are each in a range of 1 to 100 and i is in a range of 0 to 100.

16. A method of protecting human skin from ultraviolet radiation comprising topically applying to said skin, in a cosmetically acceptable carrier, the composition of claim 11.

17. A method of protecting human skin from ultraviolet radiation, comprising topically applying to said skin, in a cosmetically acceptable carrier, a compound of formula (I):

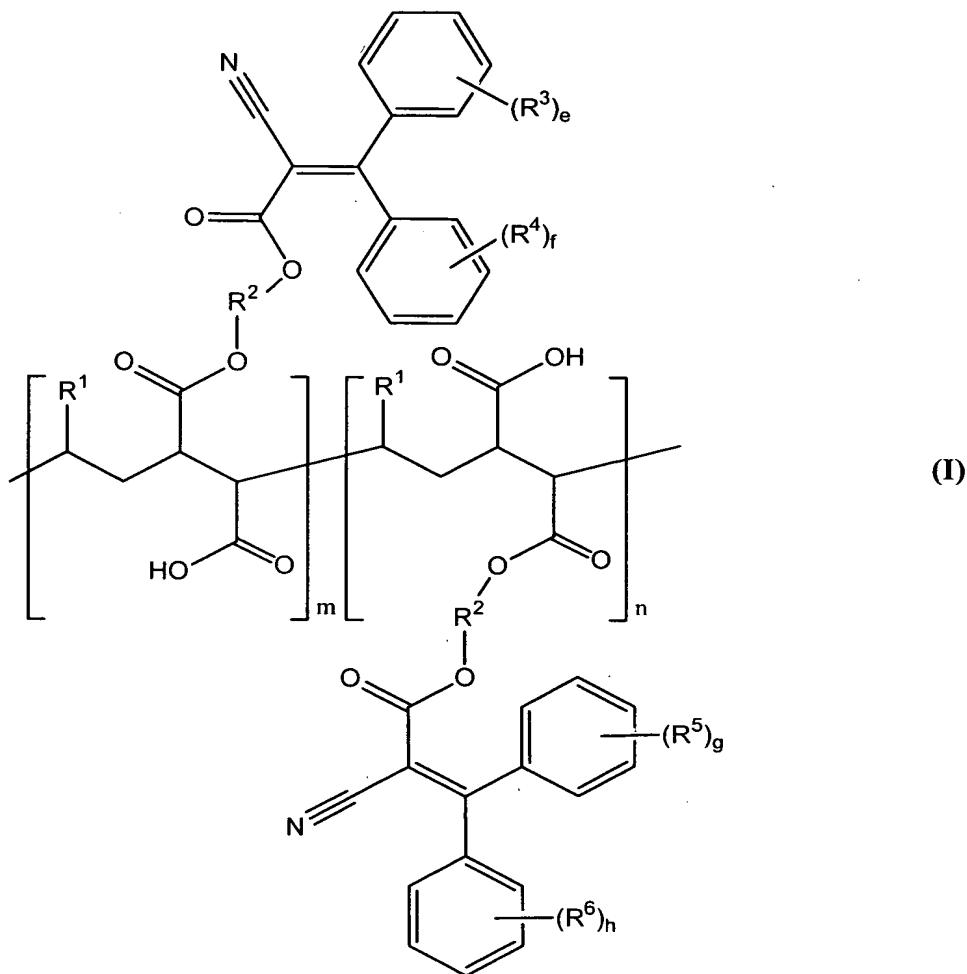


5      wherein  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^3$ ,  $\text{R}^4$ ,  $\text{R}^5$ , and  $\text{R}^6$  are the same or different and selected from the group consisting of  $\text{C}_1\text{-C}_{30}$  alkyl,  $\text{C}_1\text{-C}_{30}$  substituted alkyl,  $\text{C}_3\text{-C}_8$  cycloalkyl,  $\text{C}_3\text{-C}_8$  substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl, substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino,  $\text{e}$ ,  $\text{g}$ ,  $\text{f}$ , and  $\text{h}$  are each in the range of 0 to 4,  $\text{m}$  and  $\text{n}$  are each in the range of 0 to 5000, and the sum  
10     of  $\text{m}$  plus  $\text{n}$  is at least 1.

18. The method of claim 17, wherein R<sup>1</sup> and R<sup>2</sup> are selected from the group consisting of C<sub>1</sub>-C<sub>30</sub> alkyl groups.

19. The method of claim 18, wherein R<sup>1</sup> is a C<sub>16</sub> straight chain alkyl group, and R<sup>2</sup> is a 2,2-dimethylpropyl group.

5 20. A method of waterproofing a surface, comprising applying a compound of formula (I) to a selected area of said surface:



wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, and R<sup>6</sup> are the same or different and selected from the group consisting of C<sub>1</sub>-C<sub>30</sub> alkyl, C<sub>1</sub>-C<sub>30</sub> substituted alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub>

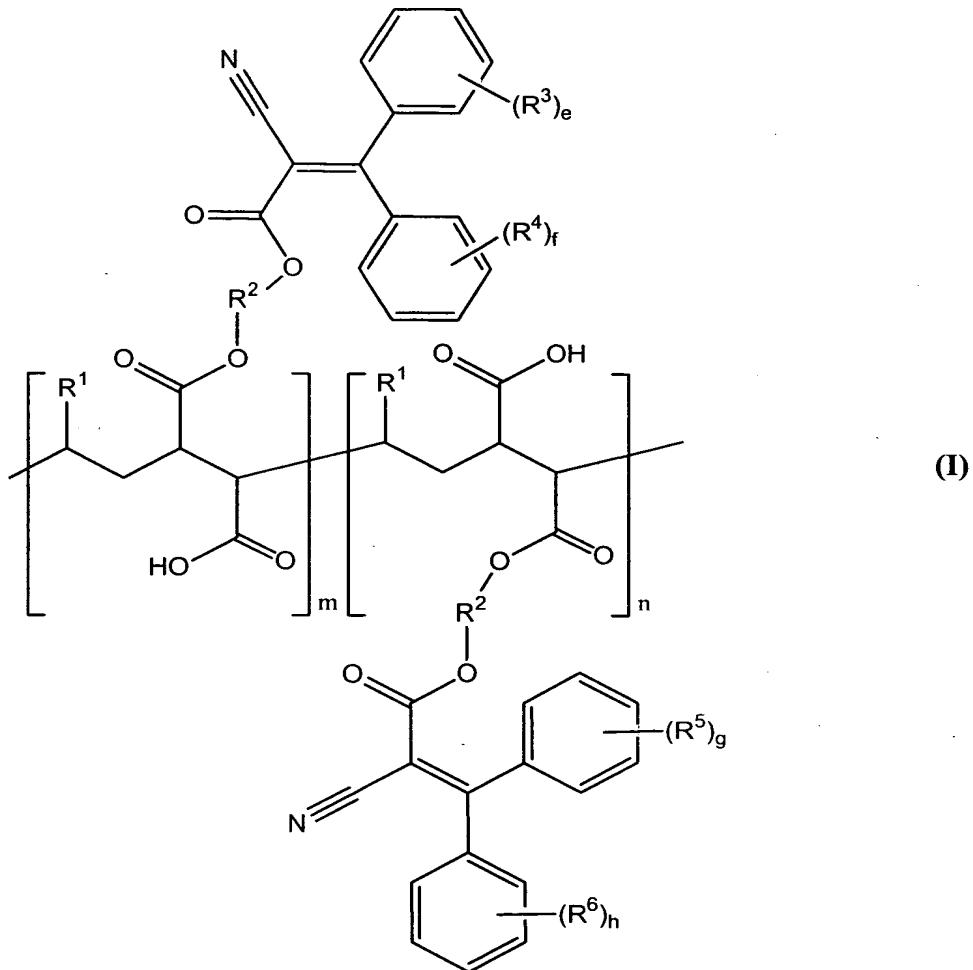
10 substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl,

substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino, e, g, f, and h are each in the range of 0 to 4, m and n are each in the range of 0 to 5000, and the sum of m plus n is at least 1.

21. The method of claim 20, wherein R<sup>1</sup> and R<sup>2</sup> are selected from the  
5 group consisting of C<sub>1</sub>-C<sub>30</sub> alkyl groups.

22. The method of claim 21, wherein R<sup>1</sup> is a C<sub>16</sub> straight chain alkyl group, and R<sup>2</sup> is a 2,2-dimethylpropyl group.

23. A method of protecting a selected area of a material from  
photodegradation, comprising applying a compound of formula (I) to said selected  
10 area of said material:

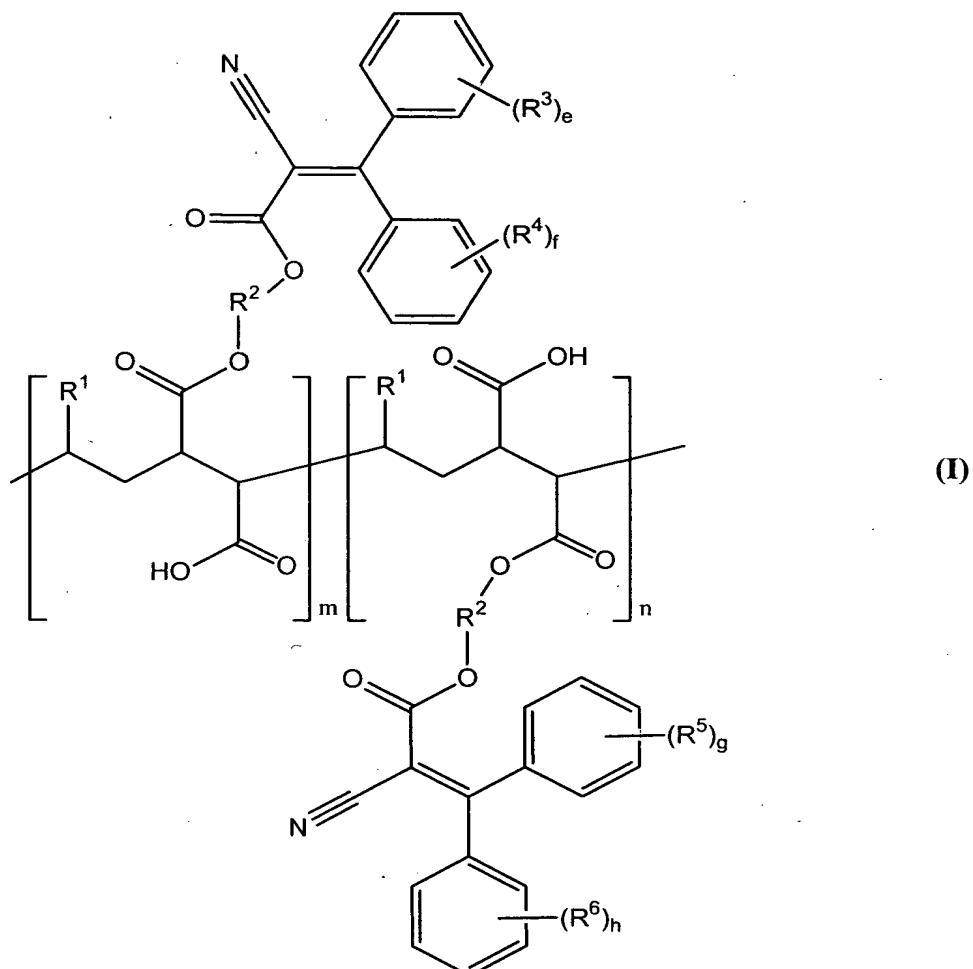


wherein  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$ , and  $R^6$  are the same or different and selected from the group consisting of  $C_1$ - $C_{30}$  alkyl,  $C_1$ - $C_{30}$  substituted alkyl,  $C_3$ - $C_8$  cycloalkyl,  $C_3$ - $C_8$  substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl, 5 substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino,  $e$ ,  $g$ ,  $f$ , and  $h$  are each in the range of 0 to 4,  $m$  and  $n$  are each in the range of 0 to 5000, and the sum of  $m$  plus  $n$  is at least 1.

24. The method of claim 23, wherein  $R^1$  and  $R^2$  are selected from the group consisting of  $C_1$ - $C_{30}$  alkyl groups.

25. The method of claim 24, wherein R<sup>1</sup> is a C<sub>16</sub> straight chain alkyl group, and R<sup>2</sup> is a 2,2-dimethylpropyl group.

26. A method for forming a film over at least part of a surface, comprising spreading a compound of formula (I) on said part of said surface:



5

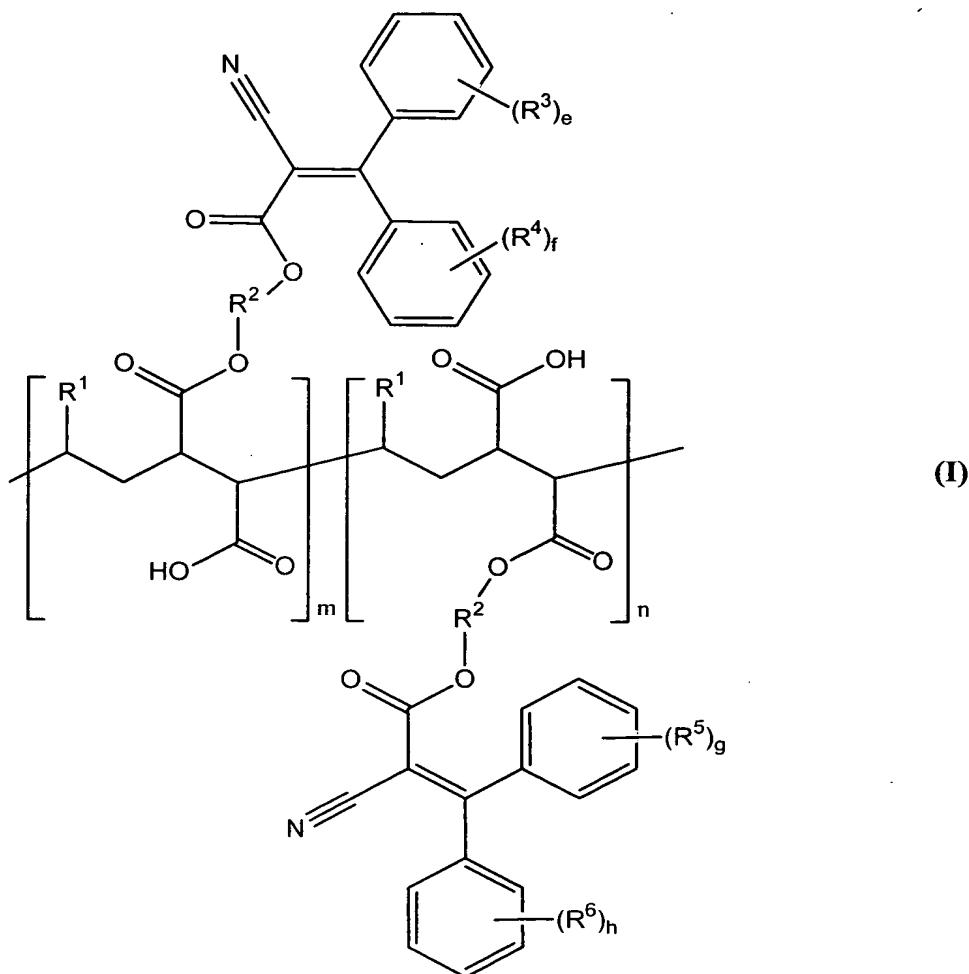
wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, and R<sup>6</sup> are the same or different and selected from the group consisting of C<sub>1</sub>-C<sub>30</sub> alkyl, C<sub>1</sub>-C<sub>30</sub> substituted alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl, substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino, e, g, f, and h

are each in the range of 0 to 4, m and n are each in the range of 0 to 5000, and the sum of m plus n is at least 1.

27. The method of claim 26, wherein R<sup>1</sup> and R<sup>2</sup> are selected from the group consisting of C<sub>1</sub>-C<sub>30</sub> alkyl groups.

5 28. The method of claim 27, wherein R<sup>1</sup> is a C<sub>16</sub> straight chain alkyl group, and R<sup>2</sup> is a 2,2-dimethylpropyl group.

29. A method of photostabilizing a dibenzoylmethane derivative, said method comprising the step of, adding to said dibenzoylmethane derivative a photostabilizing amount of a compound of formula (I):

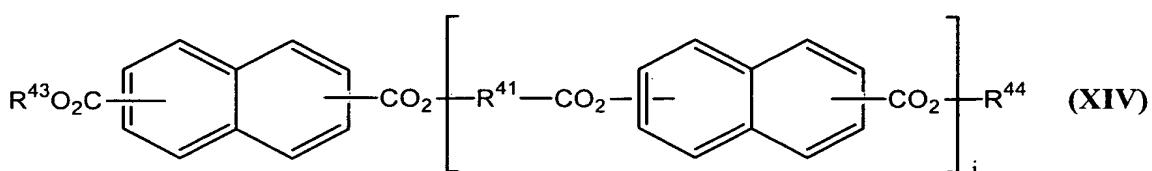
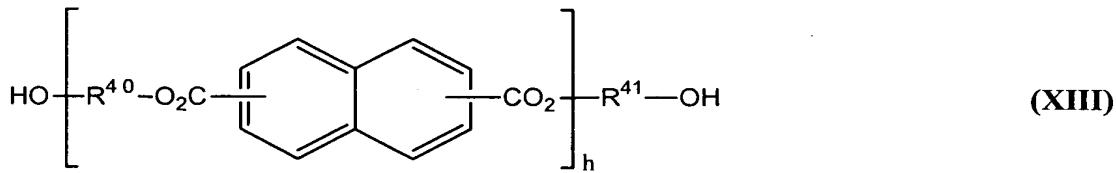


wherein  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$ , and  $R^6$  are the same or different and selected from the group consisting of  $C_1$ - $C_{30}$  alkyl,  $C_1$ - $C_{30}$  substituted alkyl,  $C_3$ - $C_8$  cycloalkyl,  $C_3$ - $C_8$  substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl, substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino,  $e$ ,  $g$ ,  $f$ , and  $h$  are each in the range of 0 to 4,  $m$  and  $n$  are each in the range of 0 to 5000, and the sum of  $m$  plus  $n$  is at least 1.

30. The method of claim 29, wherein  $R^1$  and  $R^2$  are selected from the group consisting of  $C_1$ - $C_{30}$  alkyl groups.

31. The method of claim 30, wherein  $R^1$  is a  $C_{16}$  straight chain alkyl group, and  $R^2$  is a 2,2-dimethylpropyl group.

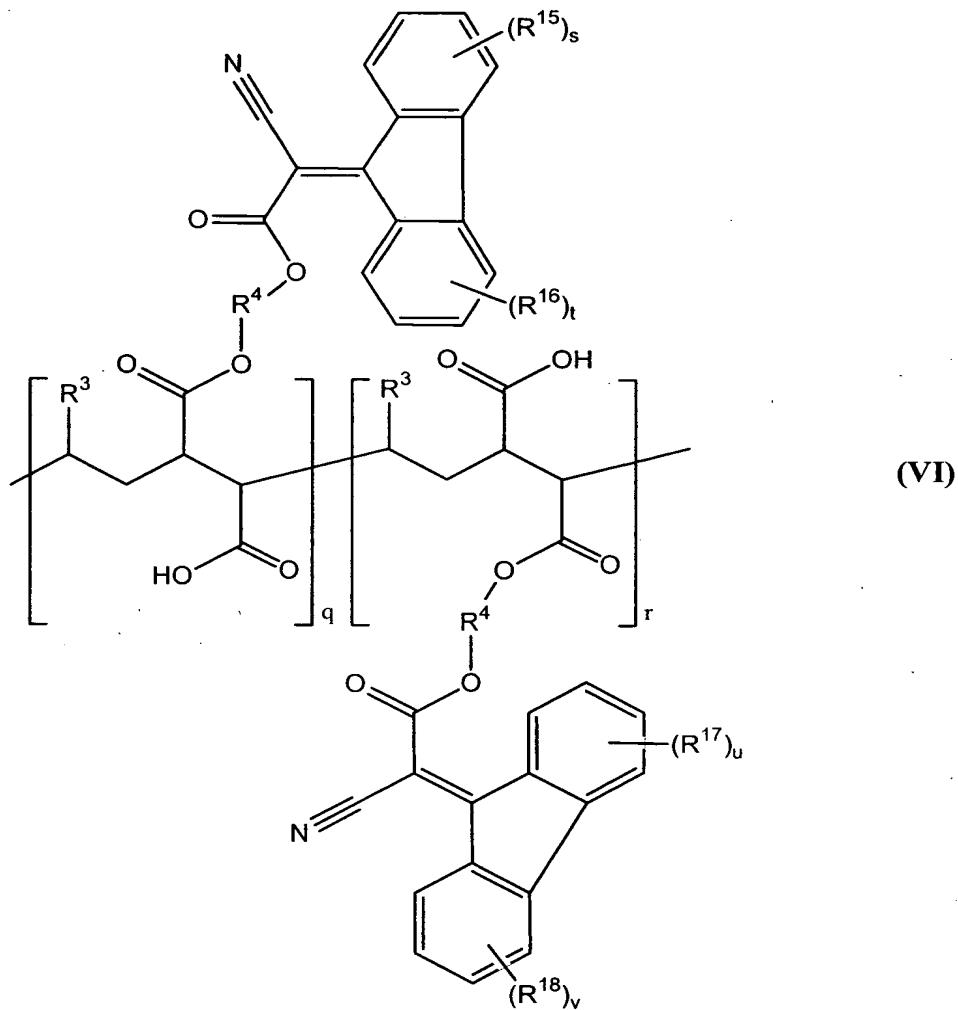
32. The method of claim 29, further comprising the step of, adding to said dibenzoylmethane derivative a diester or polyester of naphthalene dicarboxylic acid selected from the group consisting of compounds of formulae (XIII) and (XIV), and combinations thereof:



wherein  $R^{43}$  and  $R^{44}$  are the same or different and selected from the group consisting of  $C_1$ - $C_{22}$  alkyl groups, diols having the structure  $\text{HO} \text{---} \text{R}^{41} \text{---} \text{OH}$ , and polyglycols having the structure  $\text{HO} \text{---} \text{R}^{40} \text{---} (\text{---O---R}^{41} \text{---})_n \text{---} \text{OH}$ ; wherein each  $R^{40}$  and  $R^{41}$  is the same or different and selected from the group consisting of  $C_1$ - $C_6$  straight or branched

chain alkyl groups; and wherein h and j are each in a range of 1 to 100 and i is in a range of 0 to 100.

33. A compound of formula (VI):



5 wherein R<sup>3</sup>, R<sup>4</sup>, R<sup>15</sup>, R<sup>16</sup>, R<sup>17</sup>, and R<sup>18</sup> are the same or different and selected from the group consisting of C<sub>1</sub>-C<sub>30</sub> alkyl, C<sub>1</sub>-C<sub>30</sub> substituted alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl, substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino, s, t, u, and v

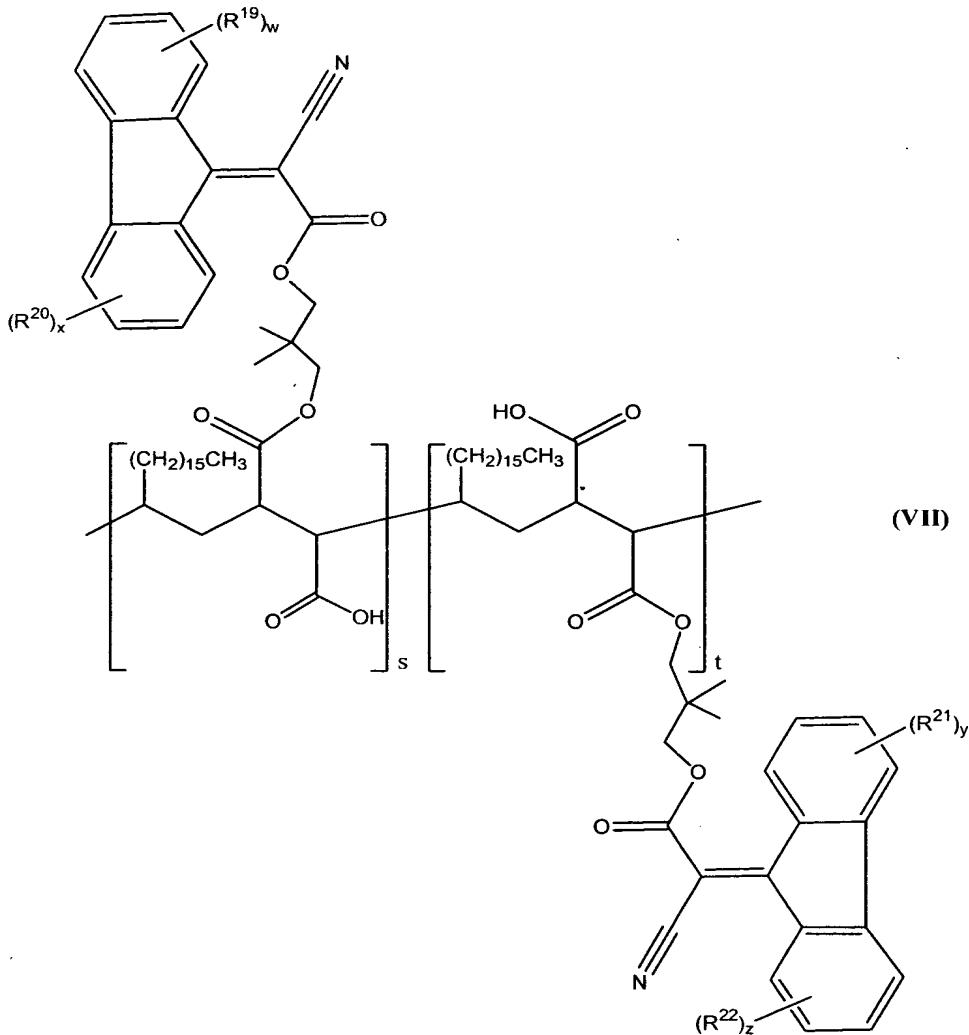
are each in the range of 0 to 4, q and r are each in the range of 0 to 5000, and the sum of q plus r is at least 1.

34. The compound of claim 33, wherein R<sup>3</sup> and R<sup>4</sup> are selected from the group consisting of C<sub>1</sub>-C<sub>30</sub> alkyl groups.

5 35. The compound of claim 34, wherein R<sup>3</sup> is a C<sub>16</sub> straight chain alkyl group, and R<sup>4</sup> is a 2,2-dimethylpropyl group.

36. The compound of claim 33, wherein the Weight-Average Molecular Weight of said compound is in the range of about 30,000 to about 110,000.

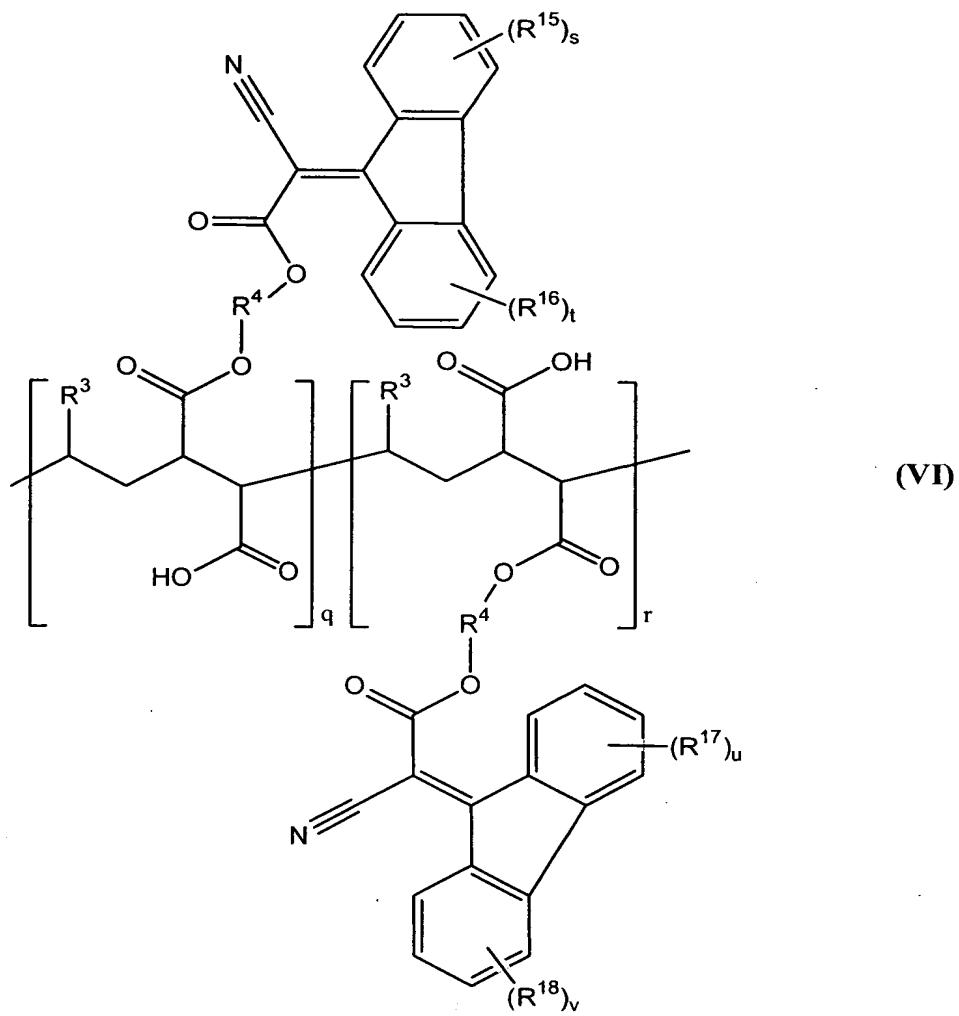
37. A compound of formula (VII):



wherein  $R^{19}$ ,  $R^{20}$ ,  $R^{21}$ , and  $R^{22}$  are the same or different and selected from the group consisting of  $C_1-C_{30}$  alkyl,  $C_1-C_{30}$  substituted alkyl,  $C_3-C_8$  cycloalkyl,  $C_3-C_8$  substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl, 5 substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino,  $w$ ,  $x$ ,  $y$ , and  $z$  are each in the range of 0 to 4,  $s$  and  $t$  are each in the range of 0 to 5000, and the sum of  $s$  plus  $t$  is at least 1.

38. The compound of claim 37, wherein the Weight-Average Molecular Weight of said compound is in the range of about 30,000 to about 110,000.

39. A sunscreen composition, comprising a mixture of a photoactive compound, and a compound of formula (VI):



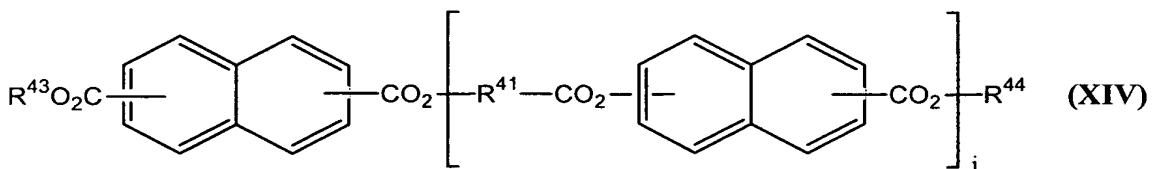
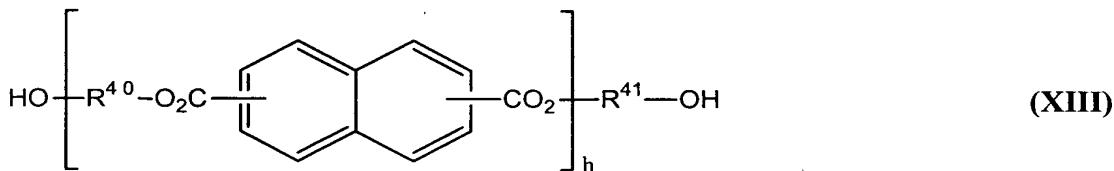
wherein  $R^3$ ,  $R^4$ ,  $R^{15}$ ,  $R^{16}$ ,  $R^{17}$ , and  $R^{18}$  are the same or different and selected from the  
group consisting of  $C_1$ - $C_{30}$  alkyl,  $C_1$ - $C_{30}$  substituted alkyl,  $C_3$ - $C_8$  cycloalkyl,  $C_3$ - $C_8$   
substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl,  
substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino,  $s$ ,  $t$ ,  $u$ , and  $v$   
are each in the range of 0 to 4,  $q$  and  $r$  are each in the range of 0 to 5000, and the sum  
of  $q$  plus  $r$  is at least 1.

40. The composition of claim 39, wherein R<sup>3</sup> and R<sup>4</sup> are selected from the group consisting of C<sub>1</sub>-C<sub>30</sub> alkyl groups.

41. The composition of claim 40, wherein R<sup>3</sup> is a C<sub>16</sub> straight chain alkyl group, and R<sup>4</sup> is a 2,2-dimethylpropyl group.

5 42. The composition of claim 39, wherein said compound of formula (VI) is present said composition in an amount in the range of about 0.01% to about 30% by weight of the total weight of the composition.

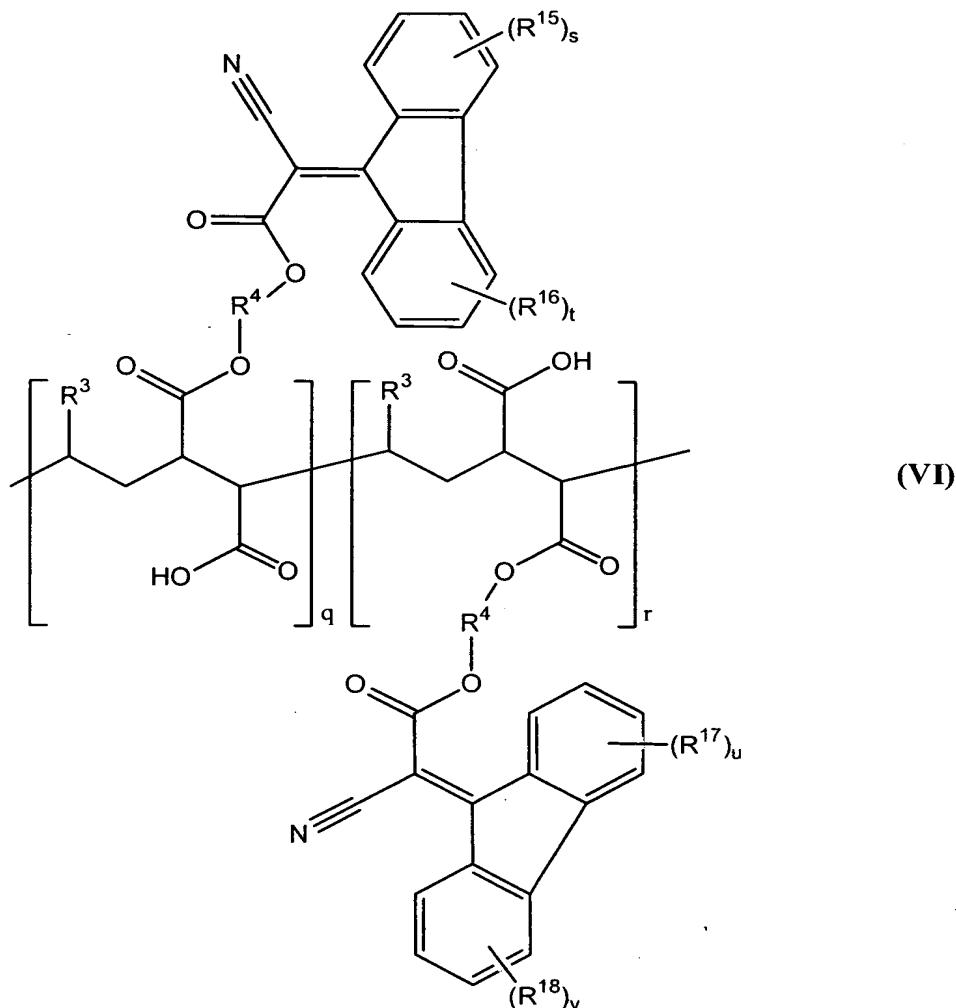
43. The composition of claim 39, further comprising a diester or polyester of naphthalene dicarboxylic acid selected from the group consisting of compounds of  
10 formulae (XIII) and (XIV), and combinations thereof:



wherein R<sup>43</sup> and R<sup>44</sup> are the same or different and selected from the group consisting of C<sub>1</sub>-C<sub>22</sub> alkyl groups, diols having the structure HO—R<sup>41</sup>—OH, and polyglycols having the structure HO—R<sup>40</sup>—(—O—R<sup>41</sup>—)<sub>j</sub>—OH; wherein each R<sup>40</sup> and R<sup>41</sup> is the same or different and selected from the group consisting of C<sub>1</sub>-C<sub>6</sub> straight or branched chain alkyl groups; and wherein h and j are each in a range of 1 to 100 and i is in a range of 0 to 100.

44. A method of protecting human skin from ultraviolet radiation comprising topically applying to said skin, in a cosmetically acceptable carrier, the composition of claim 39.

45. A method of protecting human skin from ultraviolet radiation,  
5 comprising topically applying to said skin, in a cosmetically acceptable carrier, a  
compound of formula (VI):



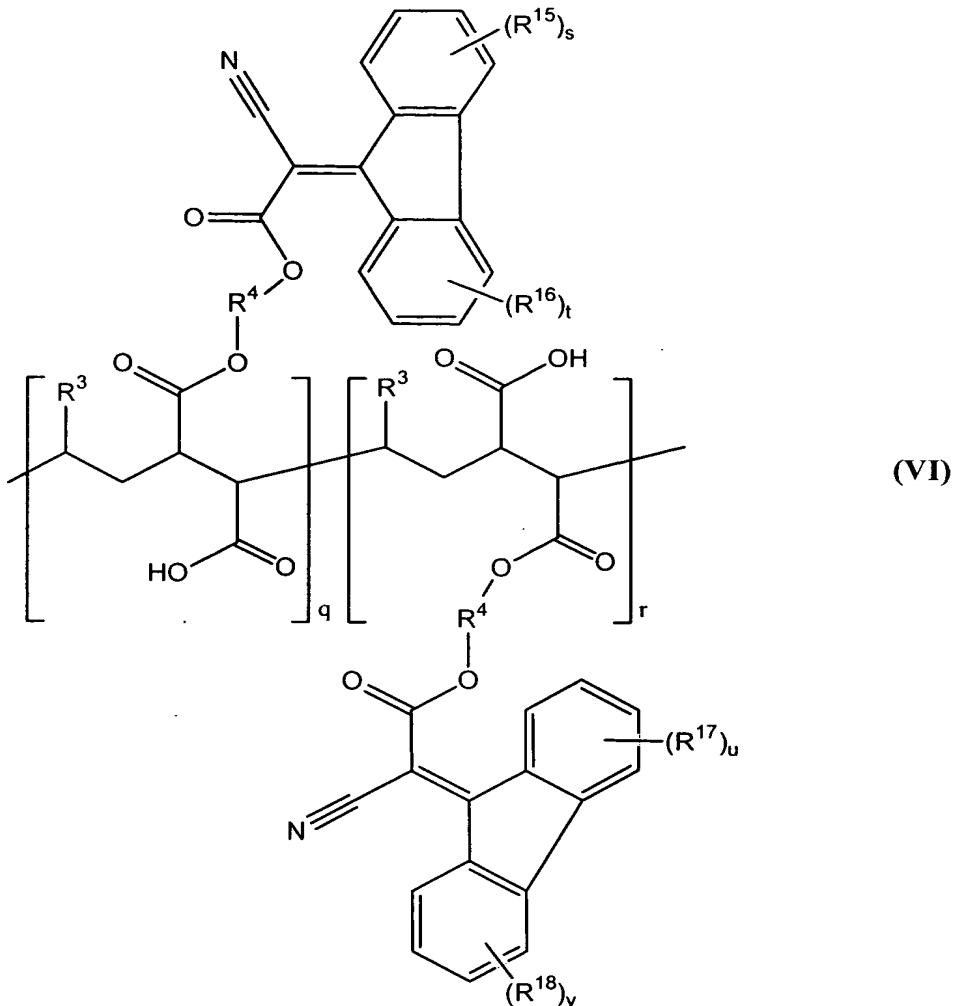
wherein R<sup>3</sup>, R<sup>4</sup>, R<sup>15</sup>, R<sup>16</sup>, R<sup>17</sup>, and R<sup>18</sup> are the same or different and selected from the group consisting of C<sub>1</sub>-C<sub>30</sub> alkyl, C<sub>1</sub>-C<sub>30</sub> substituted alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub>

substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl, substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino, s, t, u, and v are each in the range of 0 to 4, q and r are each in the range of 0 to 5000, and the sum of q plus r is at least 1.

5 46. The method of claim 45, wherein R<sup>3</sup> and R<sup>4</sup> are selected from the group consisting of C<sub>1</sub>-C<sub>30</sub> alkyl groups.

47. The method of claim 46, wherein R<sup>3</sup> is a C<sub>16</sub> straight chain alkyl group, and R<sup>4</sup> is a 2,2-dimethylpropyl group.

48. A method of waterproofing a surface, comprising applying a  
10 compound of formula (VI) to a selected area of said surface:

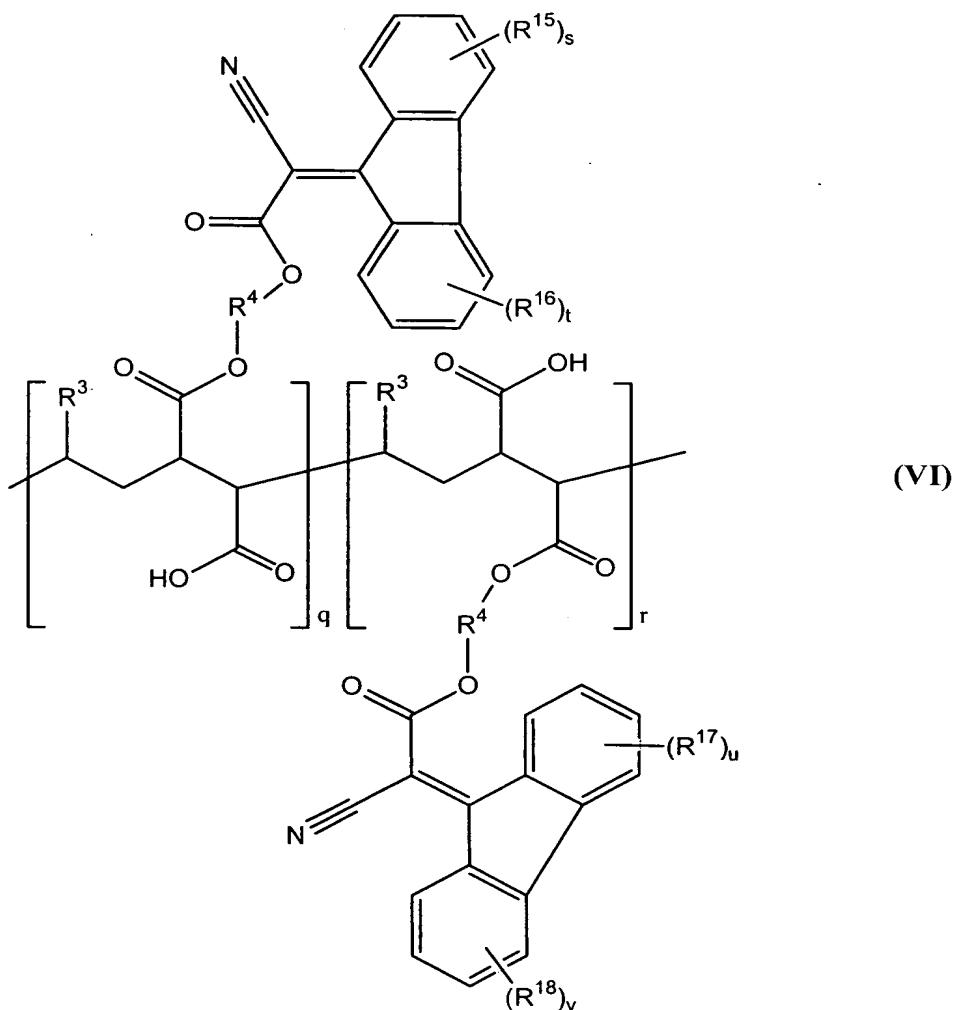


wherein  $R^3$ ,  $R^4$ ,  $R^{15}$ ,  $R^{16}$ ,  $R^{17}$ , and  $R^{18}$  are the same or different and selected from the group consisting of  $C_1$ - $C_{30}$  alkyl,  $C_1$ - $C_{30}$  substituted alkyl,  $C_3$ - $C_8$  cycloalkyl,  $C_3$ - $C_8$  substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl, 5 substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino,  $s$ ,  $t$ ,  $u$ , and  $v$  are each in the range of 0 to 4,  $q$  and  $r$  are each in the range of 0 to 5000, and the sum of  $q$  plus  $r$  is at least 1.

49. The method of claim 48, wherein  $R^3$  and  $R^4$  are selected from the group consisting of  $C_1$ - $C_{30}$  alkyl groups.

50. The method of claim 49, wherein  $R^3$  is a  $C_{16}$  straight chain alkyl group, and  $R^4$  is a 2,2-dimethylpropyl group.

51. A method of protecting a selected area of a material from photodegradation, comprising applying a compound of formula (VI) to said selected area of said material:



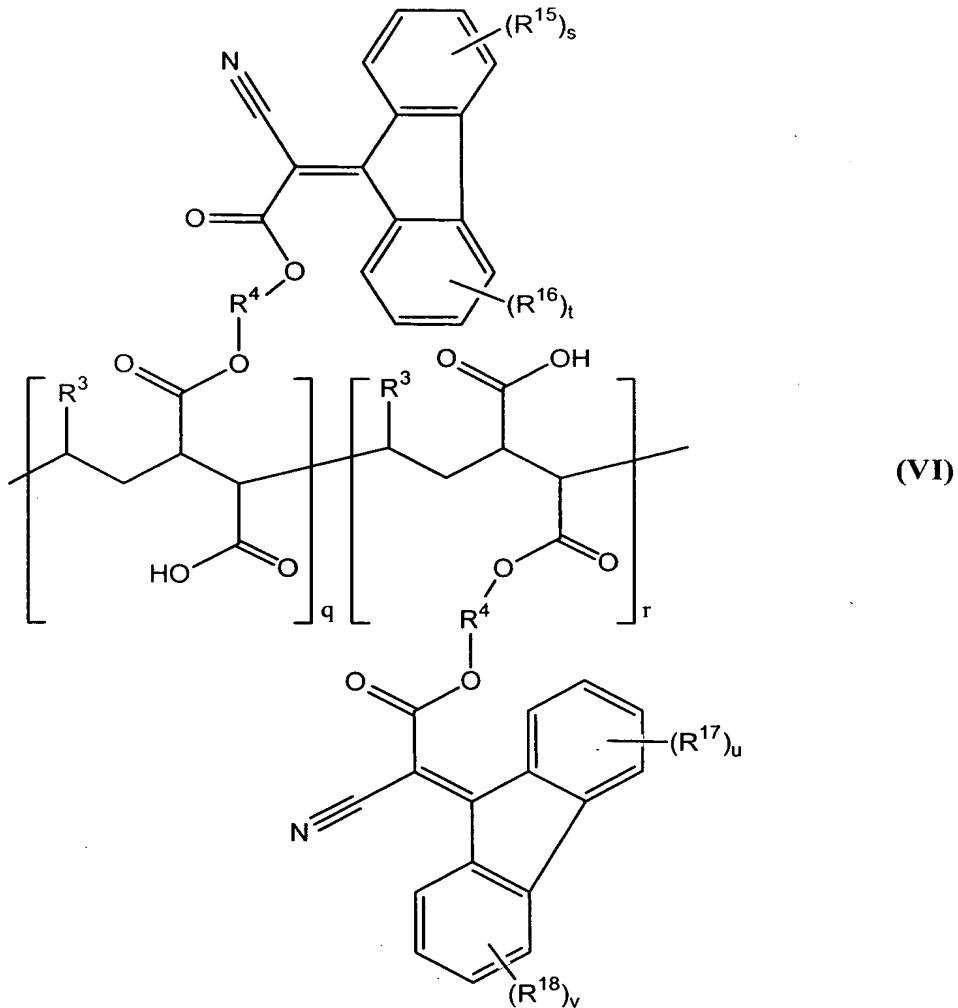
wherein  $R^3$ ,  $R^4$ ,  $R^{15}$ ,  $R^{16}$ ,  $R^{17}$ , and  $R^{18}$  are the same or different and selected from the group consisting of  $C_1-C_{30}$  alkyl,  $C_1-C_{30}$  substituted alkyl,  $C_3-C_8$  cycloalkyl,  $C_3-C_8$  substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl,

substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino, s, t, u, and v are each in the range of 0 to 4, q and r are each in the range of 0 to 5000, and the sum of q plus r is at least 1.

52. The method of claim 51, wherein R<sup>3</sup> and R<sup>4</sup> are selected from the group consisting of C<sub>1</sub>-C<sub>30</sub> alkyl groups.

53. The method of claim 52, wherein R<sup>3</sup> is a C<sub>16</sub> straight chain alkyl group, and R<sup>4</sup> is a 2,2-dimethylpropyl group.

54. A method for forming a film over at least part of a surface, comprising spreading a compound of formula (VI) on said part of said surface:

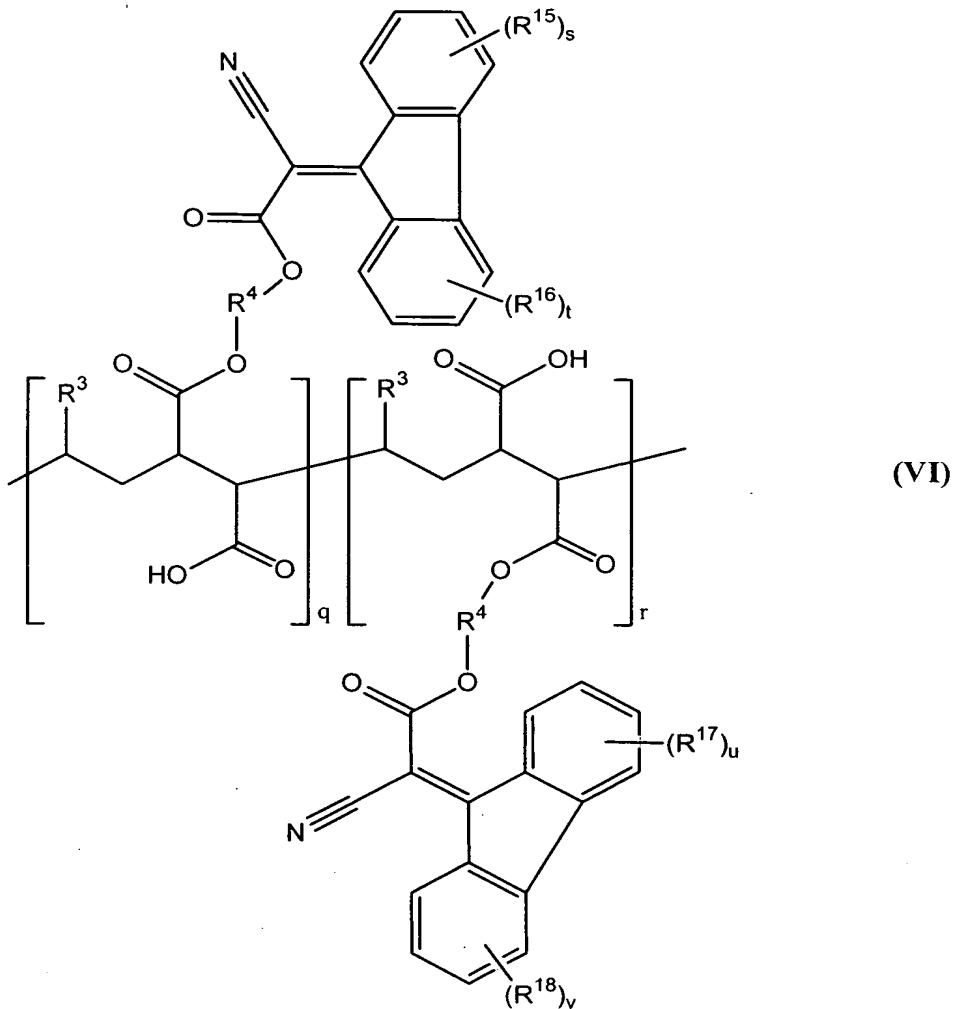


wherein  $R^3$ ,  $R^4$ ,  $R^{15}$ ,  $R^{16}$ ,  $R^{17}$ , and  $R^{18}$  are the same or different and selected from the group consisting of  $C_1$ - $C_{30}$  alkyl,  $C_1$ - $C_{30}$  substituted alkyl,  $C_3$ - $C_8$  cycloalkyl,  $C_3$ - $C_8$  substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl, 5 substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino,  $s$ ,  $t$ ,  $u$ , and  $v$  are each in the range of 0 to 4,  $q$  and  $r$  are each in the range of 0 to 5000, and the sum of  $q$  plus  $r$  is at least 1.

55. The method of claim 54, wherein  $R^3$  and  $R^4$  are selected from the group consisting of  $C_1$ - $C_{30}$  alkyl groups.

56. The method of claim 55, wherein  $R^3$  is a  $C_{16}$  straight chain alkyl group, and  $R^4$  is a 2,2-dimethylpropyl group.

57. A method of photostabilizing a dibenzoylmethane derivative, said method comprising the step of, adding to said dibenzoylmethane derivative a photostabilizing amount of a compound of formula (VI):



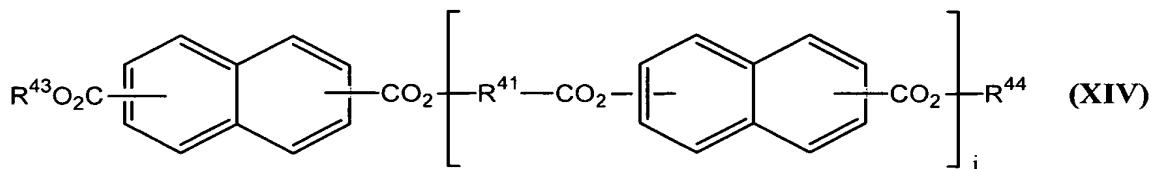
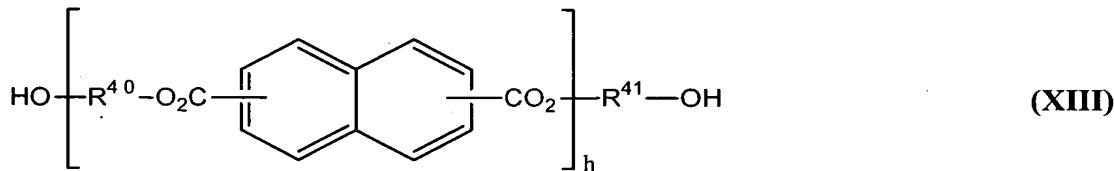
wherein  $R^3$ ,  $R^4$ ,  $R^{15}$ ,  $R^{16}$ ,  $R^{17}$ , and  $R^{18}$  are the same or different and selected from the group consisting of  $C_1$ - $C_{30}$  alkyl,  $C_1$ - $C_{30}$  substituted alkyl,  $C_3$ - $C_8$  cycloalkyl,  $C_3$ - $C_8$  substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl,

substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino, s, t, u, and v are each in the range of 0 to 4, q and r are each in the range of 0 to 5000, and the sum of q plus r is at least 1.

58. The method of claim 57, wherein R<sup>3</sup> and R<sup>4</sup> are selected from the group consisting of C<sub>1</sub>-C<sub>30</sub> alkyl groups.

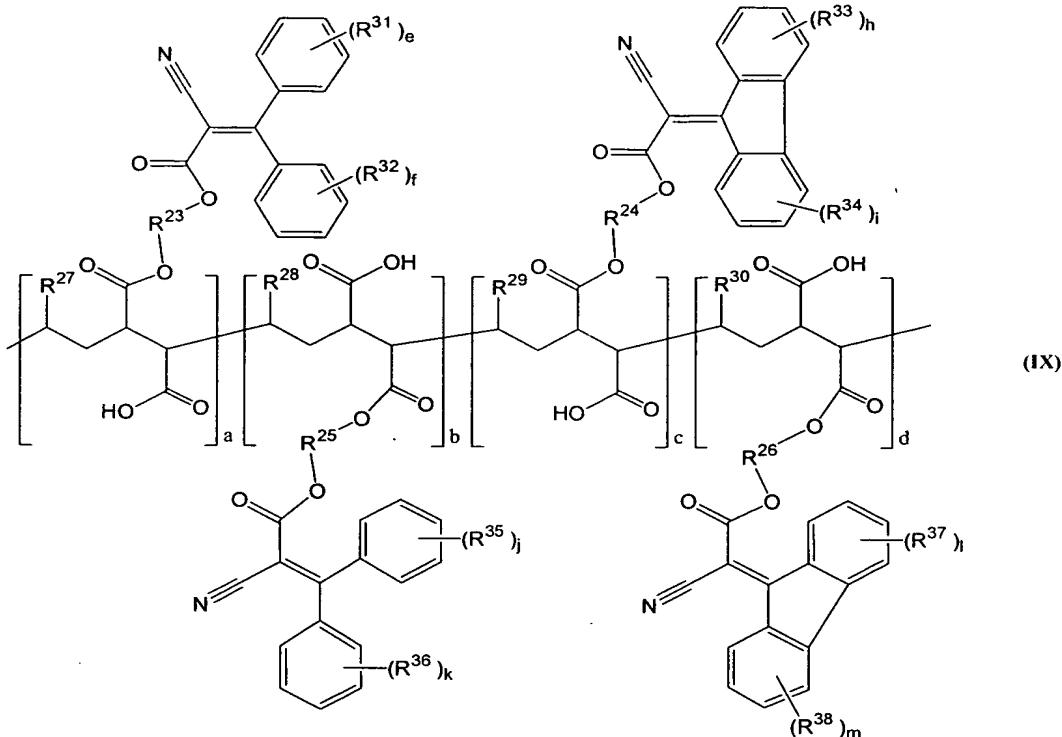
59. The method of claim 58, wherein R<sup>3</sup> is a C<sub>16</sub> straight chain alkyl group, and R<sup>4</sup> is a 2,2-dimethylpropyl group.

60. The method of claim 57, further comprising the step of, adding to said dibenzoylmethane derivative a diester or polyester of naphthalene dicarboxylic acid selected from the group consisting of compounds of formulae (XIII) and (XIV), and combinations thereof:



wherein R<sup>43</sup> and R<sup>44</sup> are the same or different and selected from the group consisting of C<sub>1</sub>-C<sub>22</sub> alkyl groups, diols having the structure HO—R<sup>41</sup>—OH, and polyglycols having the structure HO—R<sup>40</sup>—(—O—R<sup>41</sup>—)<sub>j</sub>—OH; wherein each R<sup>40</sup> and R<sup>41</sup> is the same or different and selected from the group consisting of C<sub>1</sub>-C<sub>6</sub> straight or branched chain alkyl groups; and wherein h and j are each in a range of 1 to 100 and i is in a range of 0 to 100.

20 61. A compound of formula (IX):



wherein  $R^{23}, R^{24}, R^{25}, R^{26}, R^{27}, R^{28}, R^{29}, R^{30}, R^{31}, R^{32}, R^{33}, R^{34}, R^{35}, R^{36}, R^{37}$ , and  $R^{38}$

are the same or different and selected from the group consisting of  $C_1$ - $C_{30}$  alkyl,  $C_1$ -

$C_{30}$  substituted alkyl,  $C_3$ - $C_8$  cycloalkyl,  $C_3$ - $C_8$  substituted cycloalkyl, ester, aryl,

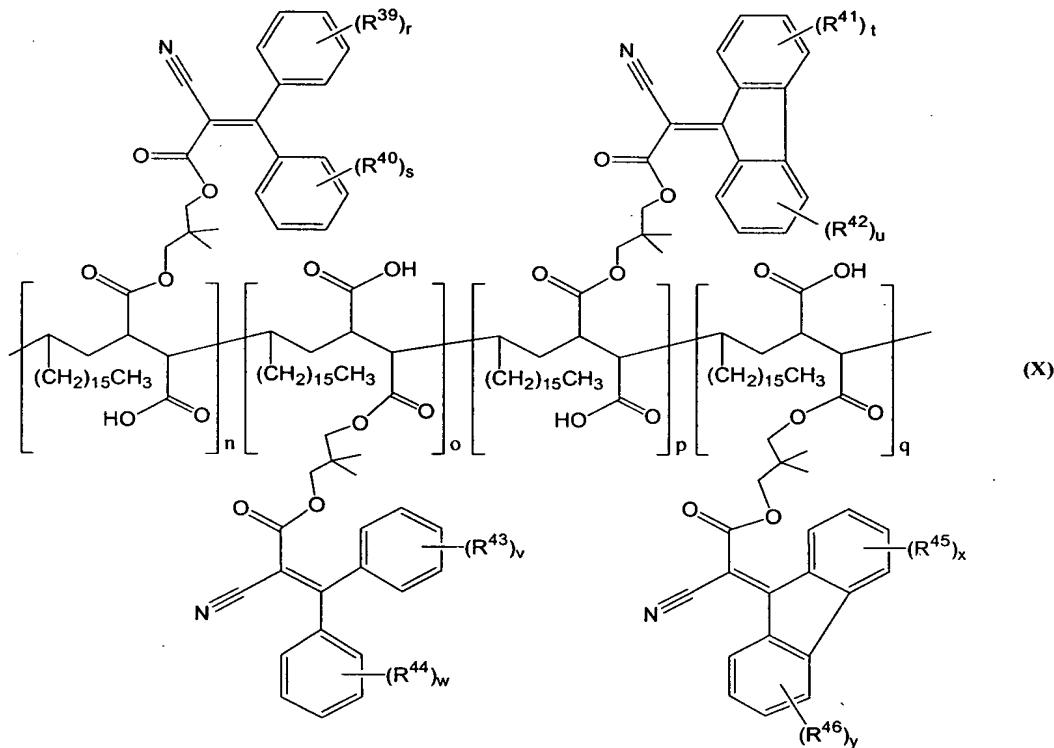
5 heteroaryl, heterocycloalkyl, substituted aryl, substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino, e, f, h, i, j, k, l, and m are each in the range of 0 to 4, a, b, c, and d are each in the range of 0 to 5000, and the sum of a, b, c, and d is at least 1.

62. The compound of claim 61, wherein  $R^{23}, R^{24}, R^{25}, R^{26}, R^{27}, R^{28}, R^{29}$ , and 10  $R^{30}$  are selected from the group consisting of  $C_1$ - $C_{30}$  alkyl groups.

63. The compound of claim 62, wherein  $R^{23}, R^{24}, R^{25}, R^{26}$  are  $C_{16}$  straight chain alkyl groups, and  $R^{27}, R^{28}, R^{29}$ , and  $R^{30}$  are 2,2-dimethylpropyl groups.

64. The compound of claim 61, wherein the Weight-Average Molecular Weight of said compound is in the range of about 30,000 to about 110,000.

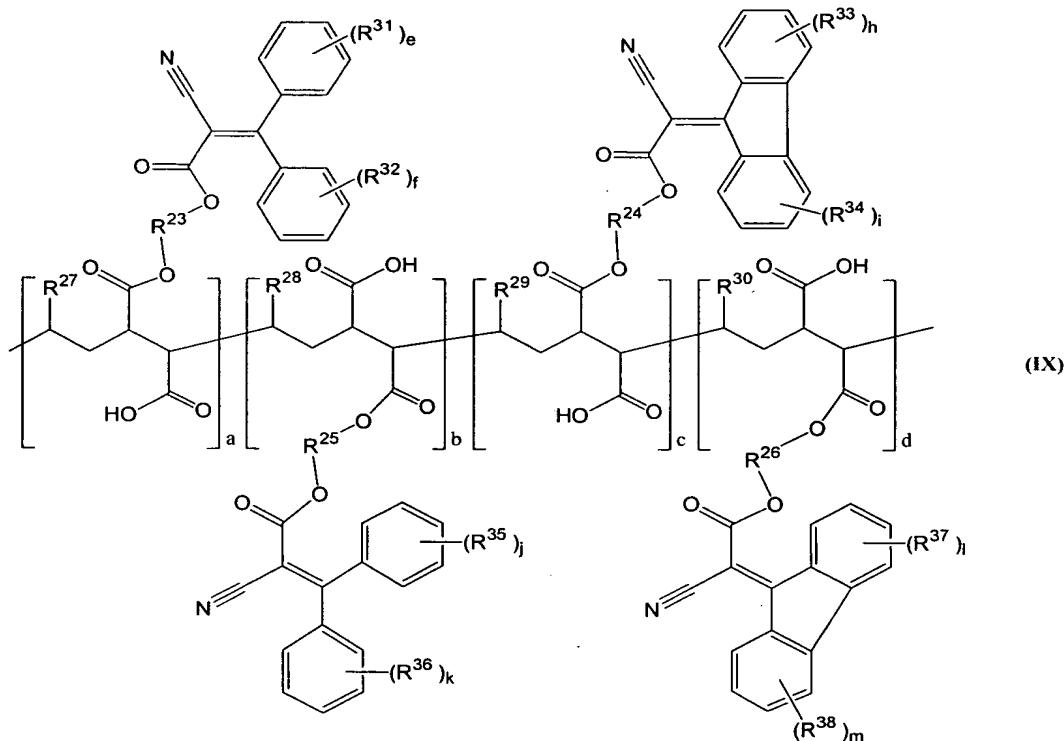
65. A compound of formula (X):



5       wherein  $R^{39}$ ,  $R^{40}$ ,  $R^{41}$ ,  $R^{42}$ ,  $R^{43}$ ,  $R^{44}$ ,  $R^{45}$ , and  $R^{46}$  are the same or different and selected  
from the group consisting of  $C_1$ - $C_{30}$  alkyl,  $C_1$ - $C_{30}$  substituted alkyl,  $C_3$ - $C_8$  cycloalkyl,  
 $C_3$ - $C_8$  substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl,  
substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino,  $r$ ,  $s$ ,  $t$ ,  $u$ ,  $v$ ,  $w$ ,  
 $x$ , and  $y$  are each in the range of 0 to 4,  $n$ ,  $o$ ,  $p$ , and  $q$  are each in the range of 0 to  
10      5000, and the sum of  $n$ ,  $o$ ,  $p$ , and  $q$  is at least 1.

66. The compound of claim 65, wherein the Weight-Average Molecular Weight of said compound is in the range of about 30,000 to about 110,000.

67. A sunscreen composition, comprising a mixture of a photoactive compound, and a compound of formula (IX):



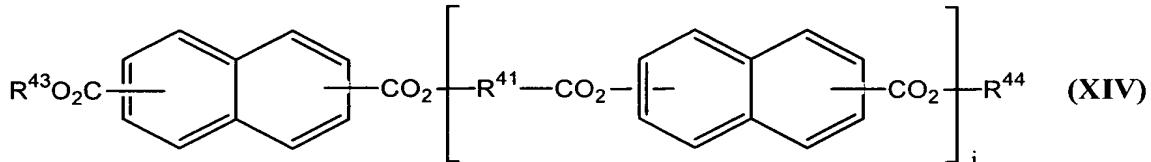
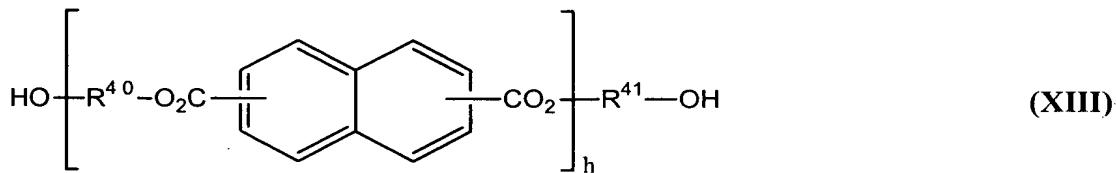
wherein  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ ,  $R^{26}$ ,  $R^{27}$ ,  $R^{28}$ ,  $R^{29}$ ,  $R^{30}$ ,  $R^{31}$ ,  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ ,  $R^{36}$ ,  $R^{37}$ , and  $R^{38}$  are the same or different and selected from the group consisting of  $C_1$ - $C_{30}$  alkyl,  $C_1$ - $C_{30}$  substituted alkyl,  $C_3$ - $C_8$  cycloalkyl,  $C_3$ - $C_8$  substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl, substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino,  $e$ ,  $f$ ,  $h$ ,  $i$ ,  $j$ ,  $k$ ,  $l$ , and  $m$  are each in the range of 0 to 4,  $a$ ,  $b$ ,  $c$ , and  $d$  are each in the range of 0 to 5000, and the sum of  $a$ ,  $b$ ,  $c$ , and  $d$  is at least 1.

68. The composition of claim 67, wherein  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ ,  $R^{26}$ ,  $R^{27}$ ,  $R^{28}$ ,  $R^{29}$ , and  $R^{30}$  are selected from the group consisting of  $C_1$ - $C_{30}$  alkyl groups.

69. The composition of claim 68, wherein  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ ,  $R^{26}$  are  $C_{16}$  straight chain alkyl groups, and  $R^{27}$ ,  $R^{28}$ ,  $R^{29}$ , and  $R^{30}$  are 2,2-dimethylpropyl groups.

70. The composition of claim 67, wherein said compound of formula (IX) is present said composition in an amount in the range of about 0.01% to about 30% by 5 weight of the total weight of the composition.

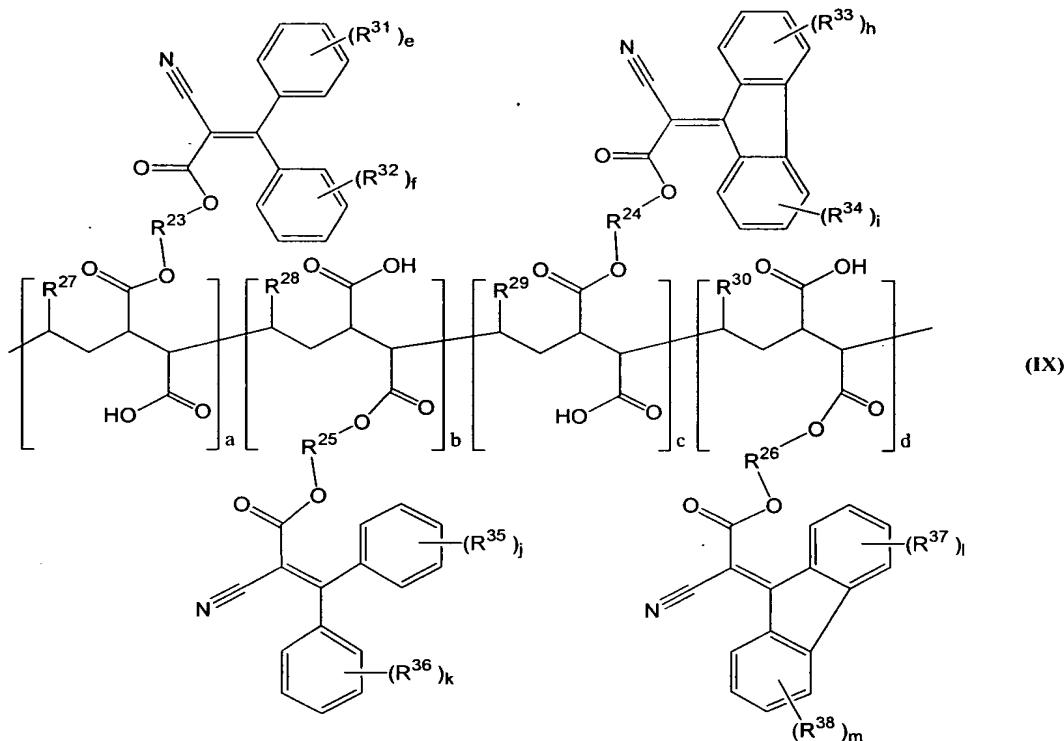
71. The composition of claim 67, further comprising a diester or polyester of naphthalene dicarboxylic acid selected from the group consisting of compounds of formulae (XIII) and (XIV), and combinations thereof:



10 wherein  $R^{43}$  and  $R^{44}$  are the same or different and selected from the group consisting of  $C_1$ - $C_{22}$  alkyl groups, diols having the structure  $HO—R^{41}—OH$ , and polyglycols having the structure  $HO—R^{40}—(—O—R^{41}—)_j—OH$ ; wherein each  $R^{40}$  and  $R^{41}$  is the same or different and selected from the group consisting of  $C_1$ - $C_6$  straight or branched 15 chain alkyl groups; and wherein  $h$  and  $j$  are each in a range of 1 to 100 and  $i$  is in a range of 0 to 100.

72. A method of protecting human skin from ultraviolet radiation comprising topically applying to said skin, in a cosmetically acceptable carrier, the composition of claim 67.

73. A method of protecting human skin from ultraviolet radiation, comprising topically applying to said skin, in a cosmetically acceptable carrier, a compound of formula (IX):

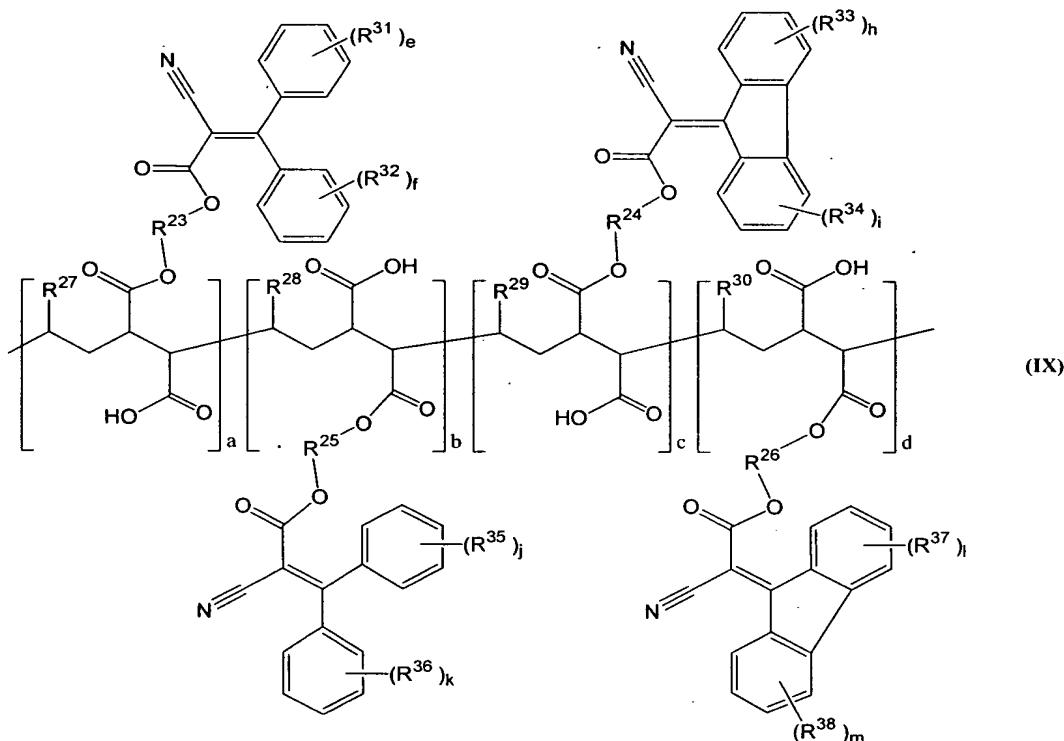


5   wherein R<sup>23</sup>, R<sup>24</sup>, R<sup>25</sup>, R<sup>26</sup>, R<sup>27</sup>, R<sup>28</sup>, R<sup>29</sup>, R<sup>30</sup>, R<sup>31</sup>, R<sup>32</sup>, R<sup>33</sup>, R<sup>34</sup>, R<sup>35</sup>, R<sup>36</sup>, R<sup>37</sup>, and R<sup>38</sup>  
are the same or different and selected from the group consisting of C<sub>1</sub>-C<sub>30</sub> alkyl, C<sub>1</sub>-  
C<sub>30</sub> substituted alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> substituted cycloalkyl, ester, aryl,  
heteroaryl, heterocycloalkyl, substituted aryl, substituted heteroaryl, substituted  
heterocycloalkyl, cyano, and amino, e, f, h, i, j, k, l, and m are each in the range of 0  
10   to 4, a, b, c, and d are each in the range of 0 to 5000, and the sum of a, b, c, and d is at  
least 1.

74. The method of claim 73, wherein R<sup>23</sup>, R<sup>24</sup>, R<sup>25</sup>, R<sup>26</sup>, R<sup>27</sup>, R<sup>28</sup>, R<sup>29</sup>, and  
R<sup>30</sup> are selected from the group consisting of C<sub>1</sub>-C<sub>30</sub> alkyl groups.

75. The method of claim 74, wherein  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ ,  $R^{26}$  are  $C_{16}$  straight chain alkyl groups, and  $R^{27}$ ,  $R^{28}$ ,  $R^{29}$ , and  $R^{30}$  are 2,2-dimethylpropyl groups.

76. A method of waterproofing a surface, comprising applying a compound of formula (IX) to a selected area of said surface:



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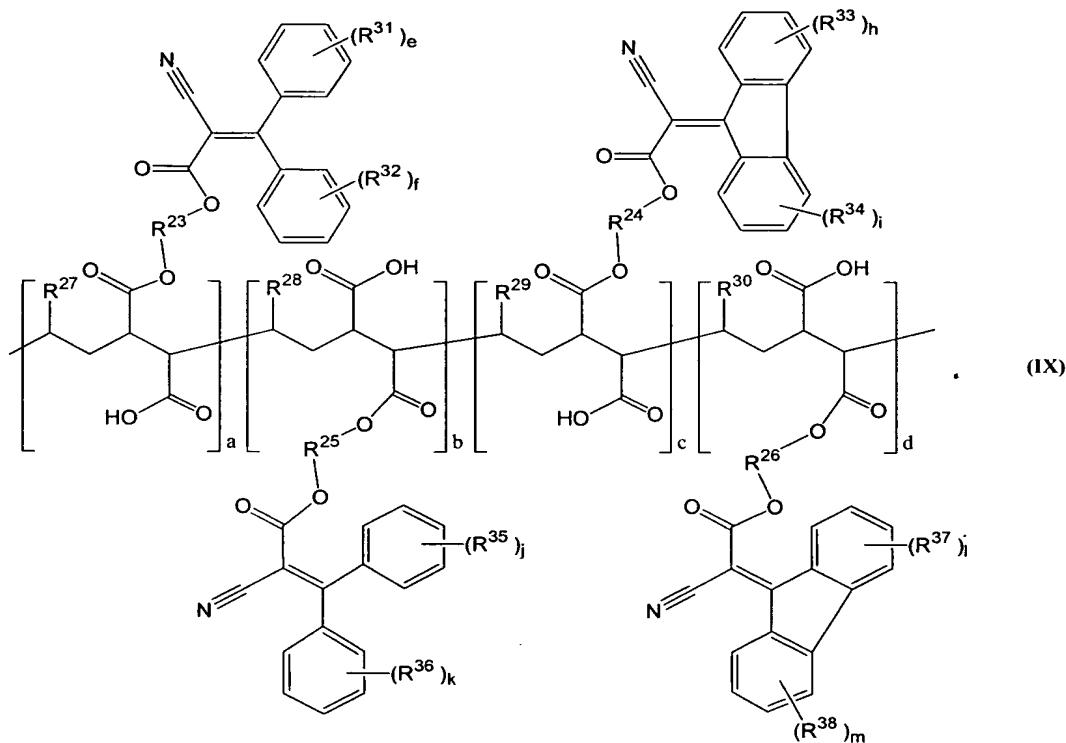
wherein  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ ,  $R^{26}$ ,  $R^{27}$ ,  $R^{28}$ ,  $R^{29}$ ,  $R^{30}$ ,  $R^{31}$ ,  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ ,  $R^{36}$ ,  $R^{37}$ , and  $R^{38}$  are the same or different and selected from the group consisting of  $C_1$ - $C_{30}$  alkyl,  $C_1$ - $C_{30}$  substituted alkyl,  $C_3$ - $C_8$  cycloalkyl,  $C_3$ - $C_8$  substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl, substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino, e, f, h, i, j, k, l, and m are each in the range of 0 to 4, a, b, c, and d are each in the range of 0 to 5000, and the sum of a, b, c, and d is at least 1.

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77. The method of claim 76, wherein  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ ,  $R^{26}$ ,  $R^{27}$ ,  $R^{28}$ ,  $R^{29}$ , and  $R^{30}$  are selected from the group consisting of  $C_1$ - $C_{30}$  alkyl groups.

78. The method of claim 77, wherein  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ ,  $R^{26}$  are  $C_{16}$  straight chain alkyl groups, and  $R^{27}$ ,  $R^{28}$ ,  $R^{29}$ , and  $R^{30}$  are 2,2-dimethylpropyl groups.

5 79. A method of protecting a selected area of a material from photodegradation, comprising applying a compound of formula (IX) to said selected area of said material:



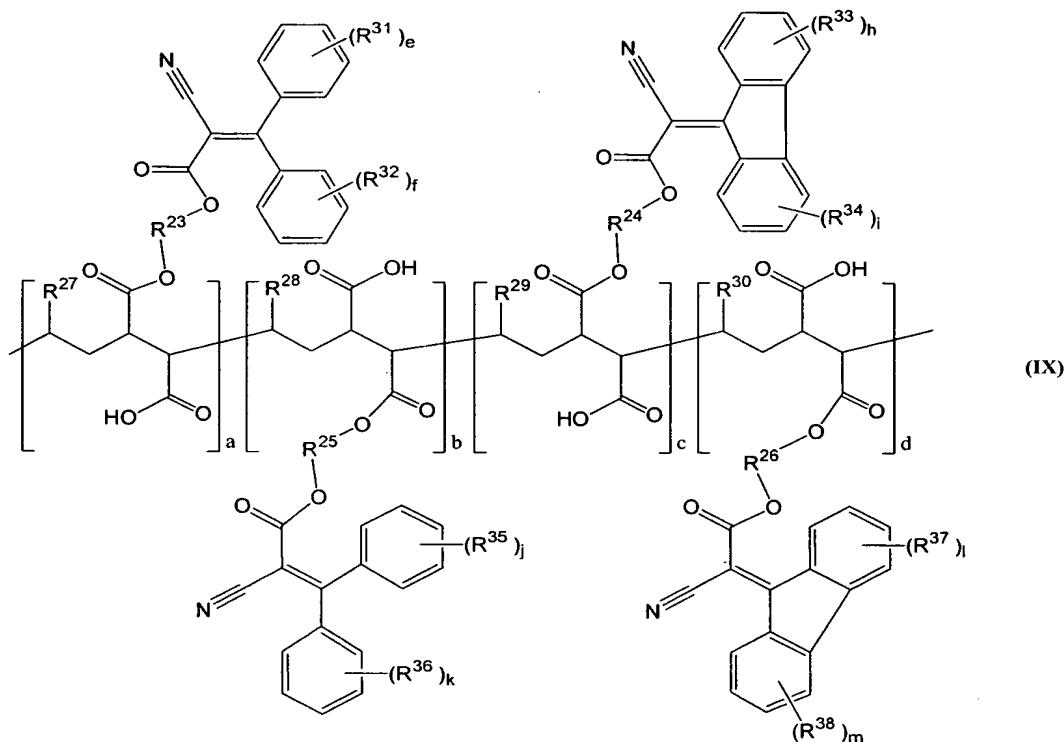
wherein  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ ,  $R^{26}$ ,  $R^{27}$ ,  $R^{28}$ ,  $R^{29}$ ,  $R^{30}$ ,  $R^{31}$ ,  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ ,  $R^{36}$ ,  $R^{37}$ , and  $R^{38}$  are the same or different and selected from the group consisting of  $C_1$ - $C_{30}$  alkyl,  $C_1$ - $C_{30}$  substituted alkyl,  $C_3$ - $C_8$  cycloalkyl,  $C_3$ - $C_8$  substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl, substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino,  $e$ ,  $f$ ,  $h$ ,  $i$ ,  $j$ ,  $k$ ,  $l$ , and  $m$  are each in the range of 0

to 4, a, b, c, and d are each in the range of 0 to 5000, and the sum of a, b, c, and d is at least 1.

80. The method of claim 77, wherein  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ ,  $R^{26}$ ,  $R^{27}$ ,  $R^{28}$ ,  $R^{29}$ , and  $R^{30}$  are selected from the group consisting of  $C_1$ - $C_{30}$  alkyl groups.

5 81. The method of claim 80, wherein  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ ,  $R^{26}$  are  $C_{16}$  straight chain alkyl groups, and  $R^{27}$ ,  $R^{28}$ ,  $R^{29}$ , and  $R^{30}$  are 2,2-dimethylpropyl groups.

82. A method for forming a film over at least part of a surface, comprising spreading a compound of formula (IX) on said part of said surface:



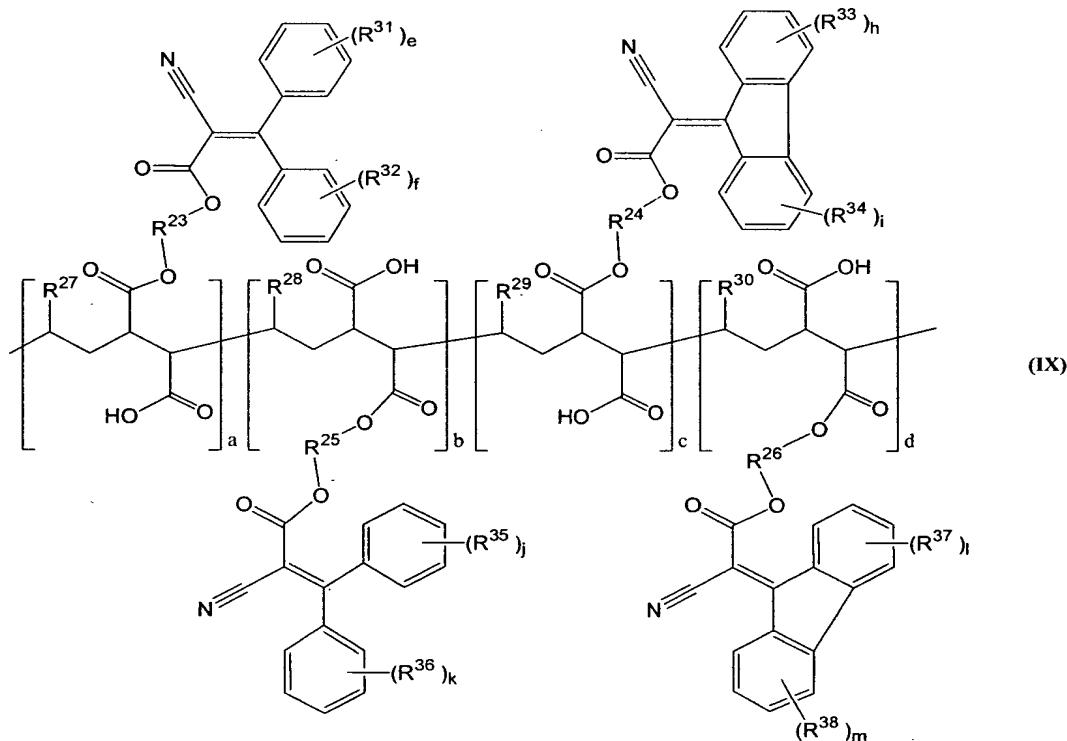
10 wherein  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ ,  $R^{26}$ ,  $R^{27}$ ,  $R^{28}$ ,  $R^{29}$ ,  $R^{30}$ ,  $R^{31}$ ,  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ ,  $R^{36}$ ,  $R^{37}$ , and  $R^{38}$  are the same or different and selected from the group consisting of  $C_1$ - $C_{30}$  alkyl,  $C_1$ - $C_{30}$  substituted alkyl,  $C_3$ - $C_8$  cycloalkyl,  $C_3$ - $C_8$  substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl, substituted heteroaryl, substituted

heterocycloalkyl, cyano, and amino, e, f, h, i, j, k, l, and m are each in the range of 0 to 4, a, b, c, and d are each in the range of 0 to 5000, and the sum of a, b, c, and d is at least 1.

83. The method of claim 82, wherein  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ ,  $R^{26}$ ,  $R^{27}$ ,  $R^{28}$ ,  $R^{29}$ , and  $R^{30}$  are selected from the group consisting of  $C_1$ - $C_{30}$  alkyl groups.

84. The method of claim 83, wherein  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ ,  $R^{26}$  are  $C_{16}$  straight chain alkyl groups, and  $R^{27}$ ,  $R^{28}$ ,  $R^{29}$ , and  $R^{30}$  are 2,2-dimethylpropyl groups.

85. A method of photostabilizing a dibenzoylmethane derivative, said method comprising the step of, adding to said dibenzoylmethane derivative a photostabilizing amount of a compound of formula (IX):



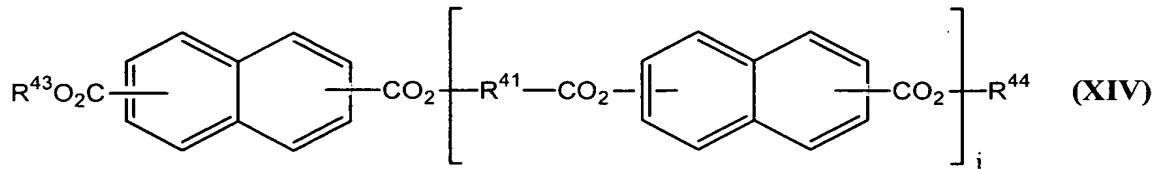
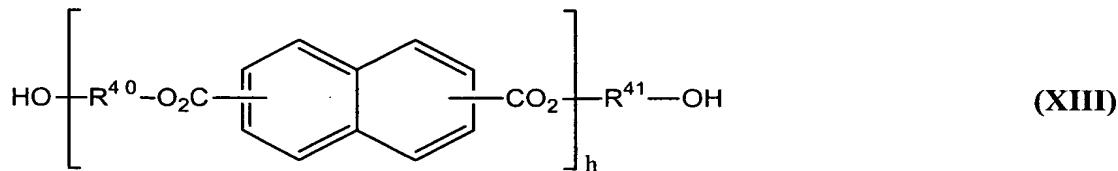
wherein  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ ,  $R^{26}$ ,  $R^{27}$ ,  $R^{28}$ ,  $R^{29}$ ,  $R^{30}$ ,  $R^{31}$ ,  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ ,  $R^{36}$ ,  $R^{37}$ , and  $R^{38}$  are the same or different and selected from the group consisting of  $C_1$ - $C_{30}$  alkyl,  $C_1$ -

$C_{30}$  substituted alkyl,  $C_3$ - $C_8$  cycloalkyl,  $C_3$ - $C_8$  substituted cycloalkyl, ester, aryl, heteroaryl, heterocycloalkyl, substituted aryl, substituted heteroaryl, substituted heterocycloalkyl, cyano, and amino,  $e$ ,  $f$ ,  $h$ ,  $i$ ,  $j$ ,  $k$ ,  $l$ , and  $m$  are each in the range of 0 to 4,  $a$ ,  $b$ ,  $c$ , and  $d$  are each in the range of 0 to 5000, and the sum of  $a$ ,  $b$ ,  $c$ , and  $d$  is at least 1.

86. The method of claim 85, wherein  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ ,  $R^{26}$ ,  $R^{27}$ ,  $R^{28}$ ,  $R^{29}$ , and  $R^{30}$  are selected from the group consisting of  $C_1$ - $C_{30}$  alkyl groups.

87. The method of claim 86, wherein  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ ,  $R^{26}$  are  $C_{16}$  straight chain alkyl groups, and  $R^{27}$ ,  $R^{28}$ ,  $R^{29}$ , and  $R^{30}$  are 2,2-dimethylpropyl groups.

88. The method of claim 85, further comprising the step of, adding to said dibenzoylmethane derivative a diester or polyester of naphthalene dicarboxylic acid selected from the group consisting of compounds of formulae (XIII) and (XIV), and combinations thereof:



wherein  $R^{43}$  and  $R^{44}$  are the same or different and selected from the group consisting of  $C_1$ - $C_{22}$  alkyl groups, diols having the structure  $HO - R^{41} - OH$ , and polyglycols having the structure  $HO - R^{40} - (-O - R^{41} -)_j - OH$ ; wherein each  $R^{40}$  and  $R^{41}$  is the same or different and selected from the group consisting of  $C_1$ - $C_6$  straight or branched

chain alkyl groups; and wherein h and j are each in a range of 1 to 100 and i is in a range of 0 to 100.